Egg Harbor Township Master Plan

Atlantic County, New Jersey

Prepared For:
Egg Harbor Township Planning Board
3515 Bargaintown Road
Egg Harbor Township, New Jersey 08234

Prepared By:

MOTT, POLISTINA & ASSOCIATES, LLC
CONSULTING ENGINEERS & PLANNERS

3122 Fire Road, Suite 201
Egg Harbor Township, New Jersey 08234

Vincent J. Polistina, PE, PP, CME
New Jersey PE No. 41978
New Jersey PP No. 5595

Adopted April 15, 2002
Revised October, 2002
Amendments Adopted November 13, 2002

Township of Egg Harbor
Master Plan 2002

Governing Body

James J. McCullough, Jr., Mayor
Francis Sutton, Deputy Mayor
John Carman, Jr.
Stanley R. Glassey
Robert Reed

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James McCullough	Carolyn Maltz
Peter Miller	James McCullough
Dorothy Saslav, Alt. No. 2	Peter Miller
Francis Sutton	Dorothy Saslav, Alt. No. 2

Planning Board Staff

Theresa Wilbert, Land Use Administrator
Kathy Fiedor
James Varallo
Patty Chatigny, Zoning Officer

Several previously adopted planning documents were utilized in the preparation of this Master Plan. These documents are included as references as indicated below:

1982 Master Plan by E. Eugene Oross Associates
1988 Reexamination Report by Adams, Rehmann and Heggan Associates
1988 Land Use Element by Adams, Rehmann and Heggan Associates
1991 Natural Resources Inventory by Adams, Rehmann and Heggan Associates
1992 Land Use Element by Adams, Rehmann and Heggan Associates
1993 Open Space and Recreation Plan by Adams, Rehmann and Heggan Associates
1994 Reexamination Report by Randall E. Scheule
1996 Housing Element by Randall E. Scheule
1998 Housing Element and Fair Share Plan by Randall E. Scheule
2000 Reexamination Report by James A. Mott

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Chapter 1: Introduction

As indicated in the Egg Harbor Township Master Plan Reexamination report of July, 2000, significant changes in State legislation along with continued pressure from the growth mandated by the Pinelands Commission have resulted in the need for Egg Harbor Township to review its Master Plan and development regulations. The Reexamination Report recommended a comprehensive review of the Master Plan and Land Use Element for possible modifications geared towards growth management issues. The Township has experienced an unprecedented level of growth during the past five (5) years and it now faced with the need for a revision to the Master Plan and Land Use Element.

The statutory requirements for the Master Plan are established in NJSA 40:55D-28 (Municipal Land Use Law). At a minimum, in order for the Township to establish valid zoning and land development standards, the Master Plan must contain the following:

1) *A statement of the objectives, principles, assumptions, policies and standards upon which the constituent proposals for the physical, economic and social development of the municipality are based.*

2) *A land use plan element (a) taking into account and stating its relationship to the statement provided for in paragraph (1) hereof, and other master plan elements provided for in paragraphs (3) through (13) hereof and natural conditions, including, but not necessarily limited to, topography, soil conditions, water supply, drainage, flood plain areas, marshes, and woodlands; (b) showing the existing and proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, educational and other public and private purposes or combination of purposes; and stating the relationship thereof to the existing and any proposed plan and zoning ordinance; and (c) showing the existing and proposed location of any airports and the boundaries of any airport safety zones delineated pursuant to the "Air Safety and Zoning Act of 1983," P.L. 1983, c. 260 (C. 6:1-80 et seq.); and (d) including a statement of the standards of population density and development intensity recommended for the municipality;*

3) *A housing plan element pursuant to section 10 of P.L. 1985, c. 222 (C. 52:27D-310), including, but not limited to, residential standards and proposals for the construction and improvement of housing.*

The Master Plan must also contain a specific policy statement indicating the relationship of the proposed development of the municipality, as developed in the master plan to (1) the master plans of contiguous municipalities, (2) the master plan of the county in which the municipality is located, (3) the State Development and Redevelopment Plan adopted pursuant to the "State Planning Act," sections 1 through 12 of P.L. 1985, c. 398 (C. 52:18A-196 et seq.) and (4) the district solid waste management plan required pursuant to the provisions of the "Solid Waste Management Act," P.L. 1970, c. 39 (C. 13:1E-1 et seq.) of the county where the municipality is located. Various other elements including the circulation element, utility service plan element,

community facilities plan element, recreation plan element, conservation plan element, economic plan element, historic preservation plan element, recycling plan element, and farmland preservation plan element are optional components of a municipality's Master Plan.

The Master Plan provides a vision for the municipality. The Master Plan provides direction and guidance for the growth, preservation, and land use decisions. A good comprehensive plan recognizes the needs of the municipality; the municipality's relationship to neighboring communities, the County, State and other regional agencies; and existing constraints and opportunities such as circulation patterns, environmental conditions, and development patterns; and includes projections and anticipated development trends. The Master Plan is a document that is adopted by the municipal Planning Board. After the plan is adopted, implementation of the plan is achieved by means of three (3) interrelated actions: legislative action by the governing body, capital improvement planning and continuing planning efforts.

Legislative action by the governing body involves the creation of ordinances to develop zoning controls (Chapters 225 of the Egg Harbor Township Code) and land development standards (Chapters 94 and 198 of the Egg Harbor Township Code.) The Zoning Ordinance and Land Development Standards provide the framework to guide the development within the Township.

Zoning controls the use of private lands. Municipalities are divided into various zoning districts and land uses are permitted or prohibited with appropriate bulk controls. The placement, spacing, size of buildings, densities, etc. are typically contained in a zoning ordinance.

The Land Development Ordinance typically contains standards that regulate the division of land. Standards for individual lots such as minimum lot size, access requirements, and any requirements for public utilities are contained in the Land Development Ordinance. Design or review standards are also often contained in a Land Development Ordinance. Design standards can include site design, lighting, landscaping, parking requirements, signage requirements and environmental impacts. Controls for other quasi-public, state or federal agencies may be incorporated as part of a local Land Development Ordinance to eliminate inconsistencies and reduce confusion for landowners.

Based on the recommendations contained in this Master Plan, the Township may modify existing or enact new zoning / land development ordinances (Ordinance) to effectuate changes. By itself, the Master Plan cannot change zoning or land development standards – it is only through the related actions by the Planning Board and Governing Body that changes to Master Plan can be accomplished.

Chapter 2: History

Egg Harbor Township lies in an area that is identified on the old Dutch maps as “Eyer Haven” or Egg Harbor. This was due to the presence of many sea bird eggs that were present in the area. Egg Harbor Township was originally part of Gloucester County. In the 19th Century, Gloucester County was divided into Atlantic County and Camden County. Egg Harbor Township was continually divided between the late 1700s and early 1800s. Two (2) of the most significant of these divisions occurred in the late 1700s. First, Galloway Township was created in 1774 from the northern portion of the Township. Second, Weymouth Township was formally separated from eastern Egg Harbor Township in 1798.

The major rivers have supplied fresh water and a viable integrated transportation system to humans throughout time. The Lenni Lenape Indians were the first known inhabitants of the region and used the Great Egg Harbor River as a source of transportation and for food and water.

Many of the first colonial settlements in Egg Harbor Township were located along the Great Egg Harbor River. Footpaths and trails were created along the river's edge that connected these early settlements. As formal roads developed, these establishments eventually grew into small communities and towns such as Scullville and Steelmanville. As far back as 1693 ferry service was established between Job's Point and other communities in Cape May County.

Many of the other small communities located in and around the Township were named for their original landholders. "McKee City" which is located partially in Egg Harbor Township and neighboring Hamilton Township is named after Colonel McKee of Philadelphia. After the Civil War Colonel McKee purchased a large tract of undeveloped land in this area. Bargaintown is an area that has several historic legends fabricated about its name. The most interesting of these legends is that speculative land values in this area collapsed in the 18th Century and a John Ireland bought numerous lots at a “bargain,” hence the name Bargaintown.

Shipbuilding was a major industry that employed many of the residents in the Township. The area had an ample supply of cedar timber and limonite ore. The elements are critical to the shipbuilding industry. The tidal waters of the tributaries of the Great Egg Harbor River provided access to the river itself and the Atlantic Ocean. Ships and shipbuilding were of such importance to the industry and well being of the area that a ship's launching was treated as a local holiday.

During the Revolutionary War the New York Harbor was closed and the Delaware Bay blockaded. Because of the blockade, the Mullica and Great Egg Harbor Rivers gained prominence in the Mid-Atlantic Region. These rivers were used to transport supplies to the colonial armies. Skirmishes between the Colonists and the British forces frequently occurred along the rivers in the coastal areas of southern New Jersey.

By 1800 the shipyards in southern New Jersey towns supplied ten percent (10%) of the vessels used for commerce in the Philadelphia region. Small boat builders played an important role in the communities along the coast and major estuaries - especially the Mullica, Great Egg Harbor, Maurice and Toms Rivers. Egg Harbor Township contributed significantly to this trade at five

(5) different locations. These locations included English Creek, Jeffers Landing, Clarkstown, Morris Beach, and Job's Point.

During the first half of the 1800s, numerous railroads, turnpikes, and canals were constructed. The ability to deliver goods and services to the urbanized areas in days rather than weeks changed rural life and hastened the movement of laborers into cities. By the 1860s, the railroads and turnpikes forged the majority of the transportation links to the marketplaces of New York City and Philadelphia. As part of these improvements a coastal railroad was constructed between Philadelphia and Atlantic City. Introduction of the first form of mass transit between Philadelphia and Atlantic City fueled the tourist trade and introduced a new "industry" into the regional economy.

The age of the automobile has brought successive development in the cross-state highway system. The completion of the Atlantic City Expressway and Garden State Parkway in the late 1940s and 1950s opened the "mainland" region and Egg Harbor Township to development. The extension of the Black Horse Pike across the northern portion of the Township generated development along the primary transportation corridors based primarily on seasonal traffic.

During this same time period the Pomona Naval Air Station was replaced with the National Aviation Facilities Experimental Station (NAFEC). This change in ownership, the completion of the Garden State Parkway, and continuing growth in the service industry spurred growth throughout Egg Harbor Township and in other mainland communities along the Township's eastern border.

Prior to the 1950s, the urbanized areas (metropolitan areas such as cities) throughout the Country gained population and continued to increase in size and financial stature. By the 1950s and 1960s, many changes in public policy/financing and social structures had been enacted and introduced decline and "urban flight" to our inner cities. The events that shaped these policies are listed below in chronological order:

- In the 1930s the federal government intervened and restructured the entire mortgage system. This new mortgage system introduced an amortized, fixed rate loan that was federally insured.

- As a direct response to the bleak economic conditions of the Great Depression, the first form of "public housing" was constructed. This program was intended to provide temporary housing to families left homeless by the economic turmoil.

- In the 1940s President Roosevelt introduced the Works Program Administration (WPA) as part of the "New Deal." This program was responsible for much of the extensive public works projects and buildings in cities.

- Subdivision regulations begin to appear in local codes and regulations in the 1940s as large-scale subdivisions and developments begin to appear. Zoning comes into widespread use in the 1950s due to the increasing need for housing.

- The National Housing Act of 1949 established public housing and assistance programs and provided aid for urban redevelopment. Federal aid was given to cities to solve their individual problems. This act was revised in 1954 to establish a comprehensive approach to redevelopment.

- The National Housing Act of 1954 differed dramatically from the previous Housing Act by establishing a basic approach and nationally defined set of standards for redevelopment. This act introduced the first large-scale "urban renewal" projects in the inner cities. Urban renewal involved the establishment of a selected area in need of redevelopment - a "blighted area", wholesale clearing of this blighted area, reconstruction of basic infrastructure such as streets and utilities, and finally selling the area to private developers at a very low cost.

- In 1956 the Defense Highway Program was introduced in the name of defense for safe evacuation of cities. An interconnected national highway system was constructed and impelled the planning of massive freeway systems throughout the country.

In the late 1960s and early 1970s the environmental and social movements gained a foothold in the nation. New Jersey was not immune to the effects of these movements. Riots and social disruption occurred on a regular basis throughout our major cities. Many social and environmental programs and legislation were enacted during these two decades. During this time the National Environmental Policy Act of 1969 (NEPA) was introduced. This act was the direct response to the cumulative effects of rapidly expanding cities, massive highway development and a burgeoning industrial sector.

During this time development continued in the seashore communities along the New Jersey coastline. Continuing development and increased awareness of the effects of development on the environment in coastal areas throughout the State created the need for the first of many environmental regulations and legislation that would be developed in successive decades. In the mid-1970s New Jersey created the Department of Environmental Protection to provide increased protection and legislation to the coastal areas.

New Jersey enacted the Coastal Area Facilities Review Act (CAFRA) in 1978 to execute the Federal Coastal Zone Management Policies. During this same year, the United States Congress established the Pinelands Commission as part of the Pinelands Protection Act. As part of this Act, the Pinelands Commission was given numerous pre-eminent land use regulatory powers. The Commission was charged with preparing a comprehensive plan that would guide growth into appropriate areas while providing protection to lands that were environmentally sensitive.

Egg Harbor Township, like many of the communities near the coast, is located in both Pinelands and CAFRA jurisdiction. Therefore, the Township is subject to the regulations of both agencies. Despite these overarching regulations, the Township continues to develop and expand. Most of the non-residential development in the Township continues along the major transportation corridors of the Black Horse Pike (U.S. Route 40) and interchanges for the Garden State Parkway and Atlantic City Expressway.

The Township began its planning efforts in 1965 with the adoption of a comprehensive development plan. Continued changes within the community and state legislation have resulted in a dynamic effort to properly plan for the development of the community. The Township's efforts towards the Master Plan and Development Ordinance include the following documents:

- 1965 - A comprehensive Development Plan prepared by E. Eugene Oross Associates
- 1975 - Egg Harbor Township Master Plan prepared by David Beckman
- 1982 - Egg Harbor Township Master Plan prepared by E. Eugene Oross Associates
- 1988 - Reexamination of the Master Plan prepared by Adams, Rehmann and Heggan Associates
- 1988 - Land Use Plan Element prepared by Adams, Rehmann and Heggan Associates
- 1988 - Housing Element prepared by Adams, Rehmann and Heggan Associates
- 1992 - Land Use Plan Element by Adams, Rehmann and Heggan Associates
- 1993 - Open Space and Recreation Plan prepared by Adams, Rehmann and Heggan Associates
- 1994 - Reexamination Report by Randall E. Scheule
- 1996 - Housing Element prepared by Randall E. Scheule
- 1998 - Housing Element and Fair Share Plan prepared by Randall E. Scheule
- 2000 – Reexamination Report by James A. Mott

A continued theme throughout these documents is continued efforts related to managing the growth being experienced in the Township. Continued development of the casino gaming industry in Atlantic City has resulted in an explosion of residential population in Egg Harbor Township and Atlantic County. Projections for Egg Harbor Township and Atlantic County indicate that population and development will continue at a steady pace even through the next twenty (20) years. This master plan will help the Township direct growth into appropriate areas and provide a general guide for future improvements.

Chapter 3: Demographic Profile

Population

The 1990 Census estimated that the population of Egg Harbor Township was almost 25,000 persons. The 2000 Census estimated that the population at over 30,000. Table 3-1 shows the historic population estimates, population increase, and percent population increase for these areas. Figure 3-1 graphically depicts the population estimates and increases during this period.

Table 3-1
Population Estimates 1930 Through 2000
for Egg Harbor Township, Atlantic County, and State of New Jersey

Year	Egg Harbor Township			Atlantic County			New Jersey		
	Population	Increase	Percent	Population	Increase	Percent	Population	Increase	Percent
1930	3,024	--	--	124,823	--	--	4,041,334	--	--
1940	3,066	42	1.4%	124,066	-757	-0.6%	4,160,165	118,831	2.9%
1950	4,991	1,925	62.8%	132,399	8,333	6.7%	4,835,329	675,164	16.2%
1960	5,593	602	12.1%	160,880	28,481	21.5%	6,066,782	1,234,453	25.5%
1970	9,882	4,289	76.7%	175,043	14,163	8.8%	7,168,164	1,101,382	18.2%
1980	19,381	9,499	96.1%	194,119	19,076	10.9%	7,365,011	196,847	2.8%
1990	24,544	5,163	26.6%	224,327	30,208	15.6%	7,730,188	365,177	5.0%
2000	30,726	6,182	25.2%	252,552	28,225	12.6%	--	--	--

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, and http://www.census.gov/population/cencounts/nj11900909.txt. Compiled by Mott, Polistina & Associates, December, 2001.

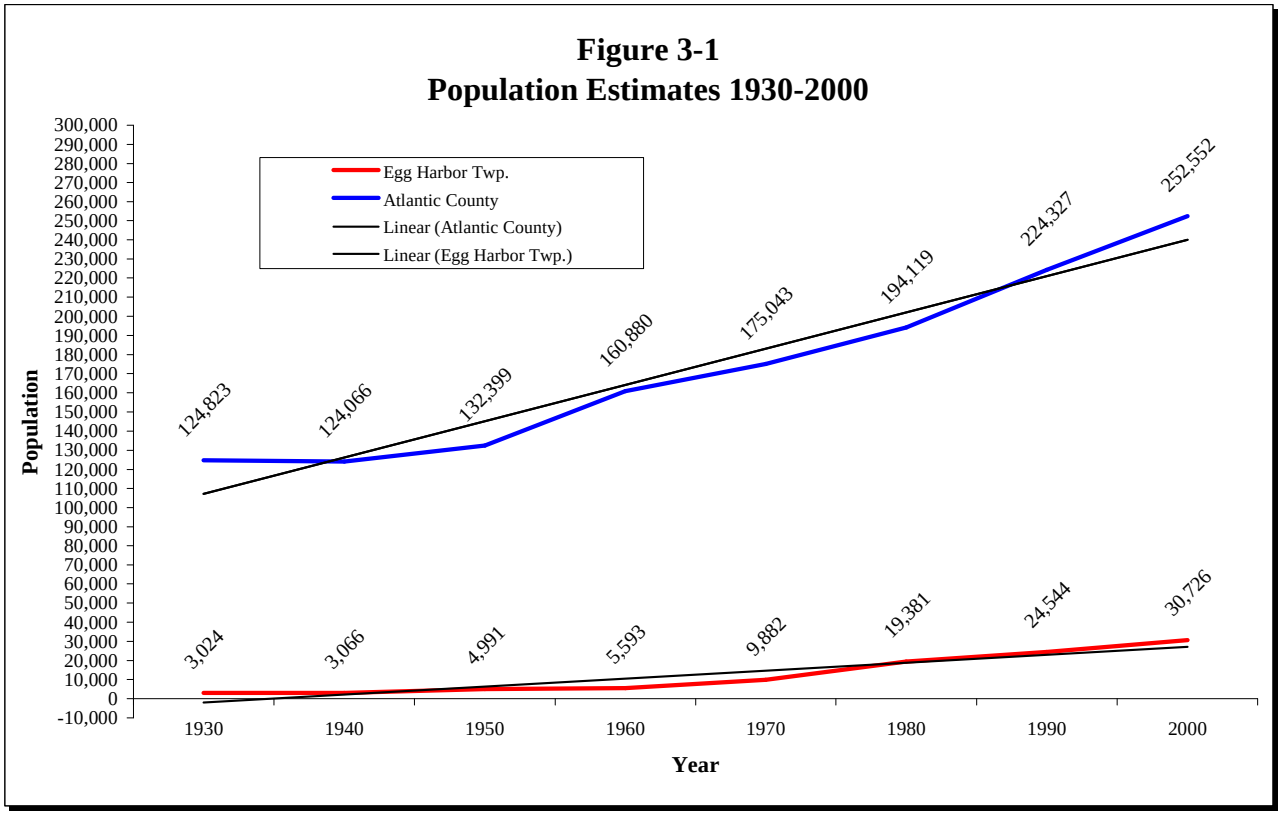
As noted in Table 3-1, the largest population increases for Egg Harbor Township occurred in the 1970s (96%), 1960s (77%), and 1940s (63%) respectively. Overall, the Township has increased by almost 28,000 residents or nearly ten times the base population of 1930. This increase far exceeded the growth rate for the County and the State. Between 1930 and 2000, Egg Harbor Township accommodated over 20% of the population increase in Atlantic County.

The prodigious increases in population since the 1980s are due to the fact that the Township has been designated as a Pinelands "regional growth" area. This designation mandates that the Township accommodate a predetermined amount of growth for the entire region in accordance with the Pinelands Comprehensive Management Plan.

The population for Atlantic County and the State of New Jersey has continued to increase as well. Population increases for Atlantic County occurred in every decade from 1930 to 2000, with the exception of the 1940s. During this decade the County lost less than 1% of its population. The largest population increases for the County occurred between 1950 and 1960 (22%), 1980 and 1990 (16%) and 1970 and 1980 (11%) respectively. The population of the County increased by 120,000 residents or nearly doubled (96% increase) between 1930 and 2000.

The State of New Jersey doubled its population between 1930 and 2000 and increased the number of residents by over 4,000,000 people during this period. The three decades that

exhibited the greatest increases were the 1950s (25%), 1960s (18%), and 1940s (16%) respectively.



Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation. Compiled by Mott, Polistina & Associates, December, 2001.

The population density per square mile in the Township increased approximately fifty-nine percent (59%) from 1980 through 2000, compared to thirty percent (30%) for the County. The population densities for Egg Harbor Township, the other "regional growth communities" - Galloway Township and Hamilton Township - and Atlantic County are shown in Table 3-2. Egg Harbor Township's population density is still the largest of these three growth communities.

Table 3-2
Population Densities 1980, 1990, and 2000

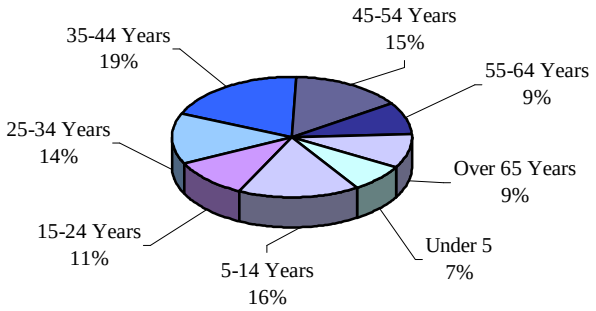
	Area in Sq. Miles	1980 Pop.	1980 Pop/Sq. Mile	1990 Pop.	1990 Pop/Sq. Mile	2000 Pop.	2000 Pop/Sq. Mile	% Change 1980-2000
Egg Harbor Twp.	***67.27***	***19,381***	***288***	***24,544***	***365***	***30,726***	***457***	***59%***
Galloway Twp.	90.36	12,176	135	23,330	258	31,209	345	156%
Hamilton Twp.	111.26	9,499	85	16,012	144	20,499	184	116%
Atlantic County	561.01	194,119	346	224,327	400	252,552	450	30%

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation. Compiled by Mott, Polistina & Associates, December, 2001.

Population Age Distribution:

The median age of Egg Harbor Township is 36.0 years of age and the average age of the population is 35.78 years. As noted in Figure 3-2, the largest portion (19%) of the population is between the ages of 35 to 44 years. The second largest portion of Egg Harbor Township's population is between the ages of 5 to 14 and the smallest portion of the Township's population is under 5 years of age.

Figure 3-2
Population by Age Groups (as a Percent)
Egg Harbor Township, Atlantic County, New Jersey



Source: U.S. Census Bureau, Census, 2000. Compiled by Mott, Polistina & Associates, December, 2001.

In 1980 approximately 1,841 persons in the Township were over the age of 65 years. This was almost ten percent (9.5%) of the 1980 population estimate. By 2000, the population of this age group increased to 2,815 persons, which is a slight *decrease* in percentage to 9.2%.

Race and Gender:

Egg Harbor Township's population is largely Caucasian. More than four-fifths (80%) of the Township residents were Caucasian in 2000. The balance of the population was comprised of approximately 10% African-American, 5% Asian and Pacific Islander, and 5% "other races" and "multiple races." "Other races" includes the Hispanic portion of the population as well as any other ethnic group.

Approximately 51% of the population is female and 49% is male.

Education:

Egg Harbor Township has seven (7) schools – three (3) elementary schools, one (1) intermediate school, one (1) middle school, and one (1) high school. The other educational facility is a private school known as the Trocki Academy of Atlantic City. This school enrolls students from kindergarten through grade twelve (12).

These seven (7) educational institutions serve the needs of the Township's residents. In October 2001, there were 6,116 students enrolled in the Township's six (6) public educational facilities. Table 3-3 and Figure 3-3 depict the number of students enrolled in each level of school and type of institution (public or private) if in high school, elementary, primary or pre-school.

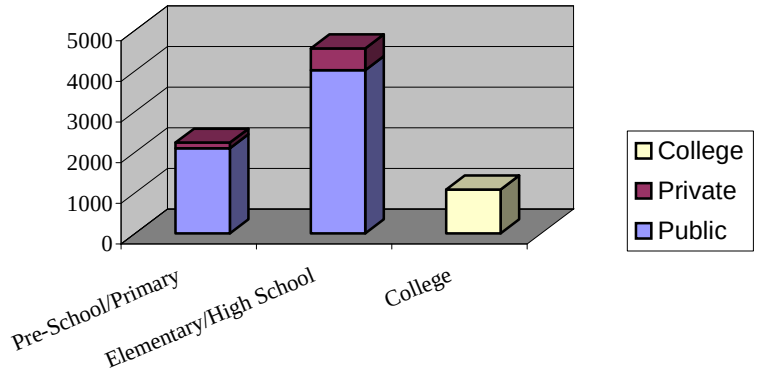
Table 3-3
Number of Persons Enrolled in Educational Facilities
Egg Harbor Township

Level of School	Public	Private
Pre-School/Primary	2,098	138
Elementary/High School	4,018	541
College	1,079	

Source: Conectiv Business Development Group, November 6, 1998, "Egg Harbor Township," page 6. Public Pre-School through HS figures from EHTBOE, June 2001. Compiled by Mott, Polistina & Associates, January, 2002.

The highest percentage of the population in school was enrolled in the public elementary and high schools – almost one-third (29%). Seven percent (7%) of the residents enrolled in school are presently enrolled in private elementary or high schools. Fourteen percent (14%) are enrolled in college. Figure 3-3 depicts the enrollment in Table 3-3 graphically.

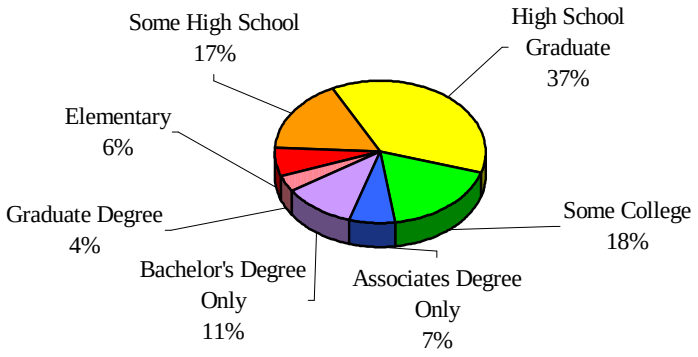
Figure 3-3
Percent of Population Enrolled in School (By Category)
Egg Harbor Township



Source: Conectiv Business Development Group, November 6, 1998, "Egg Harbor Township," page 6. Compiled by Mott, Polistina & Associates, December, 2001.

Figure 3-4 depicts the level of school completed by the adult residents of the Township. As noted in this figure, seventy-seven percent (77%) of the population has completed high school and/or continued on toward post-secondary schooling. Approximately fifteen percent (15%) of the Township's residents have completed a Bachelor's or Graduate degree.

Figure 3-4
Educational Attainment in Population 25 Years or Older
Egg Harbor Township



Source: Conectiv Business Development Group, November 6, 1998, "Egg Harbor Township," page 6. Compiled by Mott, Polistina & Associates, December, 2001.

Chapter 4: Economic Profile

Employment:

In 2000, Egg Harbor Township had a labor force of 14,599 residents. Of this estimated labor force, 13,921 residents were actively employed. Table 4-1 shows the number of employed residents in the Township, County and State from 1990 through 2000.

Table 4-1
Number of Employed Residents*
Egg Harbor Township, Atlantic County, State of New Jersey

Year	Egg Harbor Twp.	Atlantic County	New Jersey
1990	13,549	122,600	3,860,700
1991	13,243	123,300	3,770,200
1992	12,962	122,800	3,690,200
1993	12,941	121,300	3,690,800
1994	13,074	121,600	3,742,500
1995	13,328	123,800	3,803,700
1996	13,659	126,600	3,878,400
1997	14,059	128,900	3,976,900
1998	13,823	117,391	3,948,600
1999	13,875	117,830	4,013,500
2000	13,921	118,222	4,030,500

* Adjusted for seasonal employment.
Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, December, 2001.

On the average, the residents of Egg Harbor Township comprise over ten percent (11.8%) of all the labor force for Atlantic County.

Egg Harbor Township's number of employed residents increased overall 2.7% from 1990 through 2000, which is slightly lower than the increase in employed residents during the same period for the State of New Jersey (4.4%). Atlantic County had a decrease of 3.6% during this period.

The number of working women in the Township comprises over half (51.8%) the labor force. Almost forty percent (38.7%) of the women that work do not have children. Approximately one-quarter (24%) of the female population in Egg Harbor Township do not work and have no children.[1]

In 1998 over seventy percent (70%) of the persons in the Egg Harbor Township over the age of sixteen were employed and nearly one-quarter (25%) were not in the labor force. Table 4-2 depicts the unemployment rate for the Township, County and State between

[1] Connective Business Development Group, "***Atlantic County Profile, Winter 1998",*** November 6, 1998, "Egg Harbor Township," page 4.

1990 and 1999. The Township's unemployment rate was approximately one (1) percentage point higher than the State's from 1995 to the present and averaged roughly six percent (6.15%) during this period. The County's unemployment rate is moderately higher than the Township's due to the inclusion of all municipalities in the County. Municipalities such as Atlantic City, Pleasantville, Egg Harbor City, Mullica Township, Borough of Buena and Buena Vista Township have unemployment rates that are nearly double the rest of the municipalities in Atlantic County.

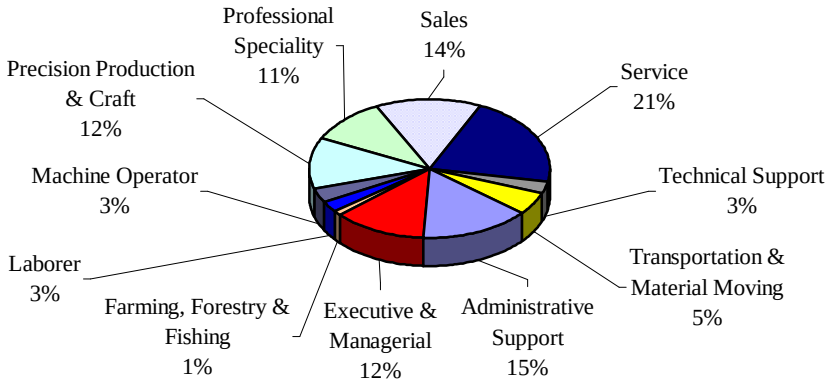
Table 4-2
Unemployment Rates 1990 -2000
Egg Harbor Township, Atlantic County, State of New Jersey

Year	Egg Harbor Twp.	Atlantic County	New Jersey
1990	5.1%	6.2%	5.1%
1991	7.2%	8.8%	6.7%
1992	8.5%	10.3%	8.5%
1993	7.7%	9.4%	7.5%
1994	7.2%	8.7%	6.8%
1995	7.0%	8.6%	6.4%
1996	6.9%	8.4%	6.2%
1997	6.1%	7.4%	5.1%
1998	6.4%	7.8%	4.6%
1999	5.9%	7.2%	4.6%
2000	4.6%	5.7%	3.8%

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, December, 2001.

Many of the residents in the Township are employed in the service industry and help supply the workforce to one of the major regional employers - the casino industry in Atlantic City. As noted in Figure 4-1, approximately one-fifth (21%) of the jobs held by the residents in the Township are in the service industry. Administrative jobs (15%) are the second highest sector of employment in the Township. The smallest sector of employment within the Township is in the Farming, Forestry, and Fishing industries (1%).

Figure 4-1
Occupation by Percent
Egg Harbor Township, Atlantic County, New Jersey



Source: Connective Business Development Group, November 6, 1998, "Egg Harbor Township," page 4. Compiled by Mott, Polistina & Associates, December, 2001.

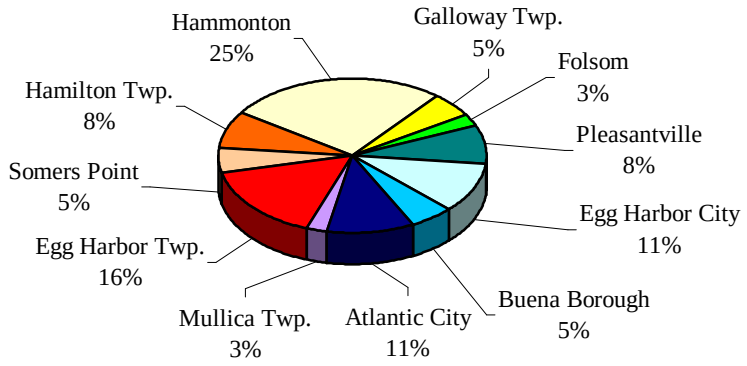
The Township provides many jobs to the residents of the Township and Atlantic County. In a survey conducted by the Press of Atlantic City, Egg Harbor Township contains almost sixteen percent (16%) of the largest employers located in Atlantic County. These employers include Atlantic Care Health Systems (#1), New Jersey-American Water Company (#6), RSL, Inc. (#26), Ireland Coffee (#29), A.E. Stone, Inc. (#30) and Jomar Corp. (#37). Table 4-3 lists the number and location of the largest employers in Atlantic County excluding casinos, Wawa, ACME Markets, the Federal Aviation Administration/Atlantic City International Airport, and the U.S. Postal Service. Figure 4-2, is a graphic representation of Table 4-3.

Table 4-3
Location of Largest Employers
Atlantic County, New Jersey

Municipality	# of Large Employers
Hammonton	10
Egg Harbor Twp.	***6***
Atlantic City	4
Egg Harbor City	4
Hamilton Twp.	3
Pleasantville	3
Buena Borough	2
Galloway Twp.	2
Somers Point	2
Folsom	1
Mullica Twp.	1
Total	***38***

Source: **The Press of Atlantic City, *Business Forecast 2000,*** January 30, 2000, page BF9. Compiled by Mott, Polistina & Associates, December, 2001.

Figure 4-2
Largest Employers
Atantic County, New Jersey



Source: **The Press of Atlantic City, *Business Forecast 2000,*** January 30, 2000, page BF9. Compiled by Mott, Polistina & Associates, December, 2001.

Of the thirty-eight (38) largest employers listed, Hammonton contains the most at ten (10), nearly twenty-five percent (25%), and Mullica Township and Folsom have the fewest with one (1) larger employer each.

Regional Employment:

Egg Harbor Township recognizes its role and significance within the regional economy. The casino industry provided 38,211 of the jobs in 1997 to the residents of Atlantic County. Table 4-4 lists each casino and number of employees at each casino.

Table 4-4
Casino Employment
Atlantic County, New Jersey

Casino	Full Time Employees	Part Time Employees	Other Employees	Total
A. C. Hilton	2,797	234	254*	**3,031**
Bally's Park Place	4,600	369	424*	**5,393**
Caesars	3,750	342	382*	**4,474**
Claridge	1,900	248	231*	**2,379**
Harrah's	3,013	130	318*	**3,461**
Resorts	2,728	225	232	**3,185**
Sands	2,583	260	226	**3,069**
Showboat	2,769	226	283	**3,278**
Tropicana	4,208	515	418	**5,141**
Trump Marina	2,700	329	399*	**3,428**
Trump Plaza	3,673	307	343*	**4,323**
Trump Taj Mahal	4,608	534	808*	**5,950**
Total	***39,329***	***3,719***	***4,318***	***47,366***

* Includes employees on a leave of absence.
Source: **The Press of Atlantic City**, *Business Forecast*, January 30, 2000, page BF9.

Chapter 5: Housing Profile

Table 5-1 depicts the number of housing units that were counted in the 1990 Census, the total number of new residential units constructed between 1990 and 2000, and the number of housing units in 2000 for the Township, County and State. Egg Harbor Township increased its total number of residential dwelling units by twenty (20%) during this decade. This increase represents more than one-quarter (28%) of the housing increase for the County and almost one percent (0.87%) of the increase for the State during the 1990s.

Table 5-1
Number of Housing Units 1990 and 2000
Egg Harbor Township, Atlantic County & New Jersey

	Housing Units 1990	Housing Units 2000	Increase	% Increase
Egg Harbor Twp.	10,018	12,067	2,049	20%
Atlantic County	106,877	114,090	7,213	6.7%
New Jersey	3,075,310	3,310,275	234,965	7.6%

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation. Compiled by Mott, Polistina & Associates, December, 2001.

Table 5-2 and Figure 5-1 depict the number of new residential dwelling units and single-family houses that were constructed between 1980 and 2001 for the Township, County and State.

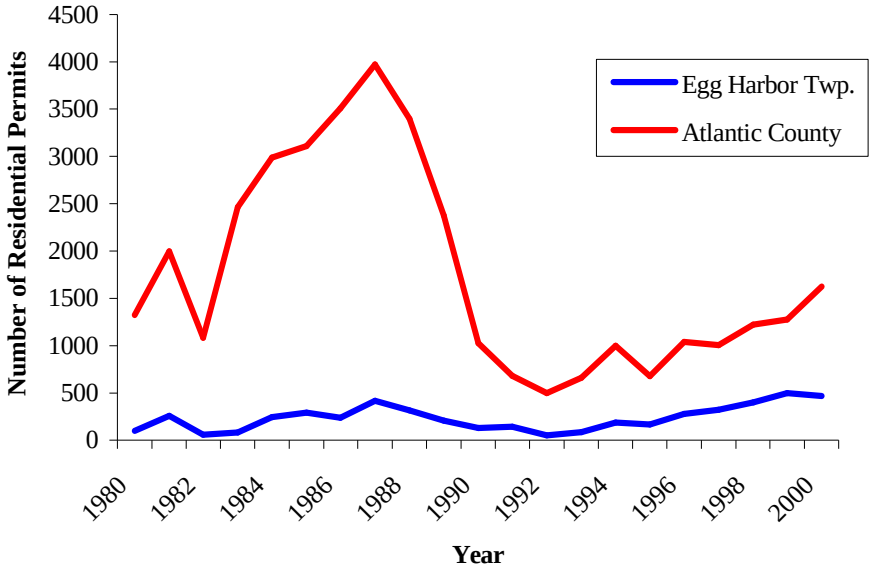
Approximately 83% of the housing constructed in Egg Harbor Township during this twenty-year period were single-family dwellings. This is slightly higher than the State average of 77% and significantly higher than the County average of 54% during this same period.

Table 5-2
Residential Building Permits Issued between 1980 - 2001
Egg Harbor Township, Atlantic County, and State of New Jersey

Year	Egg Harbor Township		Atlantic County		New Jersey	
	Single Family	Total	Single Family	Total	Single Family	Total
1980	99	99	692	1,324	14,780	22,270
1981	59	259	728	1,996	12,329	20,676
1982	59	59	611	1,080	14,005	21,297
1983	80	80	718	2,462	25,539	35,897
1984	181	245	950	2,987	32,513	43,787
1985	291	291	1,231	3,110	39,216	55,027
1986	238	238	1,368	3,507	42,607	57,353
1987	173	418	1,780	3,971	36,497	51,462
1988	193	317	1,620	3,397	28,452	40,909
1989	198	210	1,412	2,379	20,880	30,337
1990	126	130	670	1,026	12,801	17,524
1991	139	143	494	681	14,856	12,869
1992	52	52	484	498	19,072	16,506
1993	88	88	622	661	21,340	25,188
1994	189	189	987	1,001	22,437	25,388
1995	170	170	561	678	18,341	21,521
1996	201	280	917	1,041	20,853	24,173
1997	316	325	994	1,003	23,472	28,018
1998	400	400	1,148	1,220	25,459	31,345
1999	501	501	1,100	1,274	23,312	29,896
2000	468	469	1,433	1,625	25,260	34,585
2001	591	592	--	--	--	--
Total	***4,812***	***5,555***	***20,520***	***36,921***	***494,021***	***646,028***

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation; and EHT Building Department, January, 2002. Compiled by Mott, Polistina & Associates, January, 2002.

Figure 5-1
Residential Building Permits Issued between 1980 and 2000
for Egg Harbor Township and Atlantic County



Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation.
Compiled by Mott, Polistina & Associates, January, 2002.

Chapter 6: Existing Utility Service

Water and Sewer Supply

Portions of the Township are currently serviced by public water through the New Jersey American Water Company and public sewer provided by the Egg Harbor Township Municipal Utilities Authority (EHTMUA). In the portions of the Township where public water and sewer are not available, individual wells and on-site septic systems are utilized.

Egg Harbor Township has been challenged with meeting the needs of the new growth while protecting the quality of the environment. As part of the Pinelands Comprehensive Management Plan, the portions of the Township subject to the Pinelands jurisdiction are designated as a "Regional Growth Area." As part of the Regional Growth Area, current densities can result in as many as seven (7) DU/acre, with the purchase of Pinelands Development Credits.

Extent of Public/Potable Water

The portions of the Township serviced by the New Jersey American Water Company are located along the Black Horse Pike and the Garden State Parkway. Typically water service has been limited to areas in the northern part of the Township where significant non-residential development (Shore Mall, Cardiff Circle, the Black Horse Pike, etc.) and established residential developments exist.

Recent expansions to public water service include the portions of the Township that have developed at higher densities such as the Regional Growth Area. New Jersey American Water Supply Company will service many of the larger proposed residential developments.

It is important to note that the public water supply area does not include the portions of the Township that are located in either the Rural Agricultural (RA) or Conservation-Recreation-Wetland (CRW) areas. Intense development in these portions of the Township is not planned due to the environmentally sensitive soils and the presence of large areas of wetlands and wetland buffers.

Sanitary Sewer Service Area

The approximate areas of the Township that are serviced by public sewer are consistent with and included in the New Jersey Department of Environmental Protection (NJDEP) Section 208 Sewer Plan. These areas include the area included in the Pinelands Regional Growth Area and several areas of existing development outside of Pinelands as shown on Figure 6-1.

EHTMUA provides the public sewer in Egg Harbor Township. EHTMUA is part of the Atlantic County Utilities Authority's (ACUA) Coastal Interceptor regional sewer facility.

Hamilton Township, another neighboring Regional Growth Community is also part of the Coastal Interceptor. The maximum capacity of the Coastal Interceptor is seven million gallons per day (7 mgd). Hamilton Township is allocated approximately five (5) mgd. Egg Harbor Township is allocated the balance of approximately two (2) mgd.

Table 6-1 lists the current and ten (10) year projected need for wastewater for Egg Harbor Township. As noted in this table, the Township was using approximately 1.91 mgd in 1999 for commercial and residential uses. The existing system is expandable, and will be able to meet the future needs of the Township for at least the next two (2) decades.

Table 6-1
Wastewater Flows
Egg Harbor Township, Atlantic County, New Jersey
(Annual Average in Million Gallons Per Day)

Flow Type	2000	2009
Residential & Commercial	2.01	3.25
Industrial	0	0
Total	2.01	***3.25***

Source: Edward Altman Associates, August 3, 2000 & January 4, 2002.
Compiled by Mott, Polistina & Associates, January, 2002.

The portion of Egg Harbor Township that is designated a "Regional Growth Area" by the Pinelands Commission is located predominately in the sewer service area. Based on calculations performed by the Pinelands Commission, the Township can accommodate a total of 33,730 dwelling units. As of December 2000, the Township has issued approvals for only 8,000 - approximately twenty-five percent (25%) - of the total dwelling units assigned to the Regional Growth Area.

At complete "build-out" of the Regional Growth area, this would result in the addition of 30,320 dwelling units. Based on estimates for projecting the impacts of growth, it can be assumed that each new dwelling unit will use approximately 65 gallons per day.[1] This would result in an increase of 1,970,800 gallons or nearly two (2) mgd for the residential portion of the Regional Growth Area alone.

There are several areas throughout the Township that are experiencing septic system problems. Some of these sites are located in areas where public sewer will eventually be extended which will alleviate the situation. Other sites are located in areas where no plans exist to extend public sewer lines. The Township is working with the individual property owners in these areas to provide a long-term viable solution.

EHTMUA's policy is to connect existing homes where feasible and/or necessary. The Township maintains a priority list of sites or developments that are eligible. Approximately $250,000.00 is spent annually extending public sanitary sewer facilities to existing homes in the Township.

[1] *"Development Impact Assessment Handbook,"* The Urban Land Institute, 1998, page 263.

Drainage / Flood Control

In areas where no public facilities are available, the Township currently relies on drainage basins as the primary means of stormwater management. In 1988 the Township amended its development ordinances to improve the design standards and appearances of proposed drainage basins. In 1998, the Township revised its regulations and received a "Special Area Standard from the New Jersey Department of Community Affairs to regulate the design and construction of infiltration basins.

There are no regional drainage or flood control structures in Egg Harbor Township. This impacts the West Atlantic City portion of the Township. Documented inflow/infiltration problems exist in this community. In January 2001, the Township prepared a Flood Mitigation Plan which will enable the Township to explore all options for reducing the impacts of future flooding on the community, promote public awareness of flood hazards and flood insurance, and enhance and protect the natural and beneficial functions of the flood plain.

This Flood Mitigation Grant program is specifically designed to help communities that have "repetitive loss structures."[1] Egg Harbor Township had a total of fifty-two (52) repetitive loss structures since 1980. Of these 52 repetitive loss structures, thirty-nine (39) structures or seventy-five percent (75%) of the repetitive losses were located in West Atlantic City. This neighborhood will be the primary focus for the Flood Mitigation Program.

Possible measures that can be employed as part of this program include the following:

- Relocation of structures.
- Acquisition/Demolition.
- Flood proofing, including:
    - Raising structures.
    - "Wet flood proofing" - allows the lowest floor to be flooded with minimal damage.
    - "Dry flood proofing" - water is unable to pass through the structure.
    - Construction of structures - levees, floodwalls, seawalls, and bulkheads.
- Redesign of stormwater collection/conveyance systems.
- Restriction / prohibition of future development through changes in land use or zoning regulations.

After the effectiveness of each of these measures is studied, the Township will decide which measure(s) would be viable in helping to alleviate the flooding problem and create a program designed to implement these measure(s).

[1] Federal Emergency Management Agency (FEMA) defines a "repetitive loss structure" as any structure that has had two (2) or more losses reported to this agency in a ten (10) year period, where the losses exceed twenty-five percent (25%) of the value of the structure.

Solid Waste Collection & Disposal

Egg Harbor Township's physical size and development pattern have presented a challenge to the Township for collection and disposal of solid waste. The Egg Harbor Township Public Works Department (EHTPWD) collects solid and bulk waste materials within the Township. Table 6-2 depicts the amount of waste - both solid and bulk (clean wood and yard waste) - collected in 1999 and 2000.

Table 6-2
Waste Collected by EHTPWD
Egg Harbor Township, Atlantic County, New Jersey

Year	Solid Waste	Bulk Waste	
		Wood	Leaves and Grass
1999	9,567 tons	368 tons	---
2000	10,038 tons	373 tons	2,073 Cubic Yards

Source: EHT Public Works Department, January, 2002. Compiled by Mott, Polistina & Associates, January, 2002.

The ACUA collects the recyclable materials - glass, plastic containers, paper, cardboard, and aluminum - in Egg Harbor Township.

As the Township continues to grow, it is anticipated that the total amount of solid waste generated annually will also increase.

Other Utilities

Egg Harbor Township has electric, telephone, cable, and natural gas service available to its residents. Conectiv is the electric supplier, Verizon supplies basic telephone service, Comcast Cable provides cable television service, and South Jersey Gas Company provides natural gas to the residents. Propane gas is also available to the residents of the Township through various companies.

The Township requires that all major developments provide a statement regarding the adequacy of these utilities as part of the application process. This provides increased awareness of future need for these private utility suppliers.

Chapter 7: Existing Land Use Plan

A. Introduction

The land use pattern in Egg Harbor Township has been shaped by a number of factors, including location, environmental features, lands, access to transportation corridors, and economic forces. This section describes existing land use patterns and explains how those patterns have changed during the past decade. The basis for this Land Use Element is a compilation of mapping and an analysis of information contained in the sources and on these maps. An inventory of Development Constraints and Opportunities was produced to identify topography, soil conditions, drainage, flood plain areas, marshes, wastewater management plans, relationship to airport boundaries and other limitations as well as opportunities for development within the Township. These maps are included in the Natural Resources Inventory in the Conservation Element (Chapter 10). Based on the most current information available, the Township has determined the land uses that are best suited for each area of the municipality.

Many policies and laws that affect the appropriate designation of land use must be considered in the development of the Land Use Element. Some of various governmental agencies, authorities and commissions that impact local land use decisions are identified below. These agencies and a brief description of their role in the local decision making process has been included.

- The New Jersey Department of Environmental Protection (NJDEP) regulates environmentally sensitive areas and the Coastal areas throughout the State. NJDEP also implements the Section 208 Sewer Plan to determine where infrastructure improvements or expansions will be done.

- The New Jersey State Planning Commission has developed the State Development and Redevelopment P1an (State Plan). The State Plan advocates for planned development and redevelopment ("smart growth") in existing centers and other urban areas. Other state agencies such as COAH (Council on Affordable Housing), New Jersey Department of Transportation (NJDOT) and NJDEP have integrated the State Plan into their policy and decision making process.

- The Pinelands Commission implements the Pinelands Comprehensive Management Plan. This Plan provides a comprehensive system of land use management throughout the Pinelands Management Area.

- The At1antic County Planning Board has developed a Master P1an for physical development throughout the County.

- The Atlantic County Board of Chosen Freeholders has crafted a Water Quality Management Program that identifies existing and proposed sewer service areas within the County.

- The Cape-Atlantic Soil Conservation Service has produced the Soil Survey of Atlantic County. This survey includes a detailed inventory and description of the various soils that are found throughout the County. Information regarding the suitability of the land for development is included as part of the narrative descriptions of the soils types.

- The United States Department of Interior produces the National Wetlands Inventory. This inventory provides detailed maps of hydric soils (wetlands) that are environmentally sensitive and ecologica11y important resources. The lands classified as "wetlands" are typically unsuitable for development and must usually be protected by a transitional "buffer" area.

- The United States Department of Transportation oversees the operations at the Federal Aviation Administration Technical Center and the Atlantic City International Airport. This agency has developed a Compatible Land Use Zones (CLUZ) plan that identifies compatible land uses based on the level of noise (decibels) being generated at a certain site.

Other agencies that also impact local land use regulations include the New Jersey Department of Transportation (NJDOT), the South Jersey Regional Transportation Authority (SJRTA), New Jersey Transit (NJT) and the Council on Affordable Housing (COAH). This summary does not include all the agencies that have jurisdiction over the Township. It does however, provide a general understanding of the way in which these many agencies impact local land use decisions.

B. General Land Use Inventory

Egg Harbor Township is one of the largest municipalities in Atlantic County and is the fourteenth largest municipality in the State. The Township is approximately 67.27 square miles. There are roughly 10,917 acres of "developable" land in the Township. A portion of the Township is considered as part of an actual coastal waterway.

Over the past decade, substantial development has occurred in the Township. In 1999, approximately 60 percent of the total municipal area was developed, compared to only 43 percent in 1993. For the purposes of this land use analysis, "developed" land is defined as in the general land use categories of residential, commercial, industrial, recreation, farm, and farm qualified, municipal and quasi-public. "Undeveloped" land consists of vacant land, permanently preserved lands, and / or land owned by State, Federal and County governments and land classified as vacant.[1]

Land uses in Egg Harbor Township typically consist of residential, commercial, wetlands and vacant land. Most of the development in the Township has occurred in the center portion due primarily to environmental concerns in the southern portion of the Township

[1] The lands classified as part of the Atlantic City International Airport or the Federal Aviation Administration Technical Center (FAATC) are owned by Federal or other quasi-public agencies but are not considered as "vacant."

and the regulation of growth by the Pinelands Commission to the north of Ocean Heights Avenue. Since the last comprehensive land use inventory was conducted in 1993, a significant portion of the previously vacant land has been developed for single-family residential dwellings. The current land use inventory, conducted by Mott, Polistina & Associates, involved the analysis and mapping of local land uses on a parcel-by parcel basis, using the 1999 tax maps and assessment records.

Despite the rapid level of development over the past decade, the Township still contains significant amounts of undeveloped land. Vacant land makes up nearly 40 percent of the Township area, while public land owned by State, Federal, and County governments consists of 20 percent of the Township land area. While this public land will not be further developed, the vacant lands not located within the floodplain or wetland areas are potentially developable. The existing land uses, by category, are described throughout this chapter of the Master Plan.

Approximately forty-one percent (41%) of the land area within the Regional Growth Area is considered developed. The developed category includes those areas, which have been improved for residential, commercial, industrial, or transportation purposes. The present composition of the Township's land usage suggests that twenty-four percent (24%) has been developed for commerce. Residential development has generally been in the form of small settlements or subdivisions, which are situated along the Township's major road network.

Although developed lands account for a considerable proportion of land use in the Township, the majority of lands can be characterized as undeveloped. Of the total area, vacant/developable lands account for approximately 6,000 acres (45%). Wetlands, which account for approximately 1,900 acres of the total Regional Growth Area landmass, constitute a significant proportion of this undeveloped land. These hardwood, cedar and pitch pine lowland wetlands are especially prevalent adjacent to the Patcong Creek and its tributaries.

Although agricultural production areas do not currently comprise a significant aspect of the Township's landscape or economy, they do serve as an important link with historical land use and as reservoirs of open space. Lands currently considered in active agricultural production totaled approximately 1,200 acres in 1987. This figure represents the necessity of these areas for the continued provision of goods within a regional context. These areas will become increasingly important open space areas as development activities continue. Within the Regional Growth Area, active agricultural areas are most prominent between Mill and Delaware Road adjacent to the Parkway.

The significance of the Township's undeveloped acreage must be recognized and considered in future planning decisions. The Township's heritage and rural ethic are assets which should be preserved, as they serve to reinforce sensitive environmental systems and promote a sense of balance between man and nature. As development pressures continue, efforts to maintain this balance will become more difficult and will depend increasingly upon proper utilization and planning of the vacant, developable

uplands and adjacent wetland corridors. This area, when planned properly, can provide valuable opportunities for open space, preservation of forest areas, wildlife management areas and access to waterways. These areas can also function as transition zones between highly developed and less developed areas. Through zoning and the utilization of appropriate density controls, cluster techniques and adequate plans for open space and recreation, much of the Township's rural character can be maintained.

This low-growth scenario for the Township's undeveloped land areas, especially those lands under the jurisdiction of CAFRA's limited growth policy, takes on increasing importance considering the mandate imposed by the Pinelands Commission for the Township to accommodate regional growth influences. Therefore, the maintenance and preservation of this rural ethic should be incorporated into development plans for the Regional Growth Area.

Commercial activities in the Township can generally be characterized as exhibiting a range of uses including professional and business offices, restaurants, food markets, delicatessens, personal service establishments, and regional and sub-regional centers such as the Shore Mall and English Creek Center. These facilities have generally been located as a result of market trend evaluations, a technique that can be expected to continue. In an effort to discourage the inefficiencies of strip development, innovative regulations regarding the location and orientation of commercial uses is necessary. Since traffic generation and access are often difficult issues to address, regulations should be considered which encourage limited and/or shared access, and generous landscaping for aesthetic enhancement. The existing land use map is shown as Figure 7-1.

Pinelands

The existing Land Use Plan provides for five (5) categories of residential uses within the Regional Growth Area of the Township due to the recent elimination of the RG-5 residential district and incorporation into the RG-4 residential district. These residential zoning districts will permit a range of densities and housing types and will encourage clustering as a means of preserving open space. Access to public sewerage is a necessary prerequisite for cluster development and for conventional development on lots less than one (1.0) acre in size. No increase in density above the maximum stated within each respective district is to be permitted.

Establishment of the residential districts has been based on both the Township's desire to locate the majority of the Pinelands-induced growth in areas where infrastructure and services are either available or planned, the maintenance of existing neighborhoods and the widely recognized need to protect sensitive environment areas. Single-family residential development, which is to be served by conventional septic systems, shall conform to the CMP requirement for minimum lot area of three and two-tenths (3.2) acres. The densities and minimum lot sizes outlined herein for each respective zone presume public sewerage availability.

1. RG-1 – This district is the most distant from any existing and /or proposed public sewerage facilities and is located in the southwest corner of the Regional Growth Area. The primary intent of this district is to encourage the development of detached single-family dwelling units at low densities. Densities of 1.0 Dwelling Unit (DU)/Acre and 1.75 DU/Acre with PDCs are recommended in this district. Single-family detached dwelling units shall be the only residential unit type permitted in this zone. Recommended minimum lot sizes for base and PDC densities are 30,000 square feet and 17,200 square feet, respectively. There are approximately 365 acres of undeveloped lands in this district.

2. RG-2 – The intent in designating this district is to maintain the low-density single-family character of this area and protect environmentally sensitive lands. This proposed district encompasses approximately 1,500 acres of undeveloped uplands in two distinct areas. The largest of these areas is conterminous with the Garden State Parkway and includes much of the lower drainage area to Patcong Lake. The second part of this district encompasses the proposed Pine Oak Park and is bounded by English Creek Avenue, Ocean Heights Avenue and Hamilton Township. The minimum lot size recommended in this district is 10,500 square feet with PDCs to achieve a density of 2.50 DU/Acre. Developments at the base density of 1.25 DU/Acre will require a minimum lot size of 22,000 square feet.

3. RG-3 – In keeping with the development type recommended for the RG-1 and RG-2 districts, single-family detached dwellings at a density of 2.25 DU/Acre on lots of at least 14,000 square feet are recommended for this district. Purchase of PDCs will enable an increase in density to 3.75 DU/Acre and a reduction in lot size to 8,000 square feet. This district includes approximately 1,400 acres of undeveloped uplands, in three separate areas. The largest of these areas includes the DeCarlo tract and the High School and has extensive frontage along both English Creek and Ocean Height Avenues. Two smaller components of this district are delineated adjacent to Hamilton Township and West Jersey Avenue, and in the southeast corner of the Pinelands area adjacent to the Parkway.

4. RG-4 – This district encompasses approximately 1,950 acres of undeveloped uplands in six distinct areas. In 2001, the Township Committee and the Pinelands Commission approved the redesignation of the two previously existing RG-5 zones, which include approximately 1,100 acres of undeveloped uplands, to RG-4, as part of a 10% density reduction in the Regional Growth Area of the Township. The location of the RG-4 districts in intended to incorporate similar land uses and provide a transition between differing densities. The areas that comprise this district have been delineated partially due to development applications at 3.50 DU/Acre which have been recently approved and/or constructed.

This district is recommended for medium density residential development at 3.00 to 4.50 DU/Acre. The recommended minimum lot area for this district is 10,000 square feet. Utilization of PDCs is permitted as a means to reduce lot size to 6,700 square feet. Single-family detached, and semi-detached dwellings are permitted.

5. RG-6 – Apartments are permitted in this district in addition to single-family detached, attached and semi-detached units. Recommended densities range from 5.00 to 7.00 DU/Acre depending on PDC use. Lot sizes associated with these densities are 6,500 square feet and 4,500 square feet, respectively, for single-family detached and semi-detached units, and 2,000 square feet for attached units. This elongated district is adjacent to the Highway Business zone and includes approximately 750 acres of undeveloped uplands.

Business-Offices

The Professional Office designation is intended as a means or providing land for a variety of business and limited industrial uses, while not impacting an area with an inappropriate volume of truck traffic. The Professional Office designation is divided into two sub-categories, PO-1 and PO-2, which are differentiated from each other by the permitted uses and dimensional requirements. Both Professional Office districts will permit offices for accounting, law, real estate, health services, insurance, banks and similar uses. Warehousing, research and limited industrial use will, however, be permitted only in the less restrictive PO-2 zone.

In order to create a campus-type environment within the PO-1 district, generous setbacks for both parking areas and buildings, and preservation of wooded areas should be encouraged. The minimum required lot size for development in the PO-1 district is five (5) acres with three hundred feet (300') of road frontage. The location and number of curb cuts, total impervious coverage and minimum distance between buildings will also be coordinated to effectuate office campus development. Building setbacks of sixty feet (60') or two and one-half (2 ½) times the height of the principal building, whichever is greater, are recommended along English Creek Avenue. It may be appropriate to reduce the setback along all other roads to forty feet (40'). Not more than twenty-five percent (25%) of the required parking shall be permitted in front of any building.

Professional office parks are recommended as a permitted use in the PO-2 district on tracts fifteen (15) acres or greater. The recommended minimum lot size for office parks is one (1.0) acre, provided an average lot size of two (2.0) acres throughout the park is maintained. All development on individual lots not located within an office park shall be on lots at least two and one-half (2.5) acres in size with two hundred (200) feet of frontage.

The professional office designation is proposed for three general areas along English Creek Avenue. The two areas closet to the Black Horse Pike have been designated PO-2.

The area adjacent to the High School is PO-1. The most northerly area consists of approximately twenty (20) vacant/upland acres and is located at the intersection of English Creek Avenue and Delilah Road. This area abuts the Highway Business (HB) district and is presently zoned for residential (R-2) uses. While future development under the Professional Office designation would not permit retail uses, the proposed uses for this district are consistent with uses, which presently exist in this area. Access opportunities to English Creek Avenue and Delilah Road also enhance the potential for development of this area for uses permitted in the PO-2 district.

Moving south along English Creek Avenue to the Mckee City area, the second PO-2 district consisting of seventy-four (74) vacant/upland acres is located on either side of English Creek Avenue and is bounded on the north and south by the Highway Business (HB) district and West Jersey Avenue, respectively. The western side of English Creek Avenue is presently zoned for Light Industrial (M-1) uses. The eastern side is zoned for residential uses (R-2). Access opportunities to the Black Horse Pike (Route 40/322) via English Creek Avenue and the character of existing development in this area are conducive to and compatible with uses proposed for the PO-2 zone. Also, the delineation of an RG-5 residential zone adjacent to this PO-2 district and the implementation of responsive performance standards will help mitigate any adverse effects, which might otherwise result from incompatible land use.

The southernmost Professional Office district is delineated as PO-1 and is located just north of the Neighborhood Business (NB) district at the Five Points intersection. This district consists of approximately ninety-three (93) vacant/upland acres and is partially developed with single-family residences. The predominance of low-density residential uses in this area suggests the need to permit only such uses, which will not adversely impact existing development. The designation of this district is seen as consistent with the eventual development of English Creek Avenue as a primary north-south collector road.

Commercial

In view of the demand for services anticipated by realization of the Pineland's mandated housing, provisions should be made to expand the Township's commercial and retail services. One of the primary objectives of the commercial districts is to provide convenient shopping and service areas to existing and developing residential areas. The most extensive of these zones is the Highway Business (HB) district, which roughly parallels both sides of the Black Horse Pike. Although the boundaries of this district have been adjusted when compared to the limits of the Special Highway Development (SHD) district established in 1976, the general extent of this zone remains intact.

In an attempt to encourage a more visually pleasing environment along the Black Horse Pike, integrated development, which includes an array of commercial uses interspersed with generous landscaped areas, should be encouraged. Recommended uses to be permitted in the HB district include retail uses and services, professional, business and administration offices, medical clinics and nursing homes, research, experimental and

testing laboratories, utility and transportation stations and facilities, personal services, funeral homes, warehouses, service stations, new and used car sales, commercial recreation uses including swimming pools, waterslides and water parks, miniature golf and golf driving ranges, batting cages, bowling alleys, indoor theaters, roller and ice skating facilities, full-service restaurants, and drive-in restaurants subject to special design criteria. Dimensional standards recommended for this district require a minimum lot size of two (2) acres and two hundred feet (200') of frontage. Recommended building coverage and impervious coverage limits are thirty percent (30%) and sixty-five percent (65%), respectively. The maximum building height to be permitted is fifty feet (50').

The Regional Business (RB) zone is located in the general area surrounding the existing Shore Mall and Cardiff Shopping Center. Located as it is with convenient access via the Garden State Parkway and Black Horse Pike, the RB zone is capable of additional development, which will have a regional influence due to the number and variety of retail establishments available. Efforts to bolster development of this zone should be encouraged as a means to ensure the long-term economic viability of the existing commercial development in this area.

Permitted uses in the RB district on lots at least three (3) acres in size having three hundred feet (300') of frontage include: administrative offices of commercial and industrial partnerships, companies or corporations, banks, professional offices, public or quasi-public offices, commercial recreation uses including swimming pools, waterslides and water parks, miniature golf and golf driving ranges, batting cages, bowling alleys, indoor theaters, roller and ice skating facilities, retail sales and services, light industry, warehousing and distribution, research facilities, full-service restaurants, drive-in restaurants subject to special design criteria and personal services. Setbacks from residential zones of one hundred feet (100') should be required. Front yard setbacks may vary depending on the road jurisdiction with eighty feet (80') required from any state right of way and fifty feet (50') from any county or municipal right-of-way. Building height should be limited to forty-five feet (45') and maximum impervious coverage to seventy percent (70%).

The Neighborhood Business (NB) and Community Business (CB) Zones both permit essentially the same principal uses; however, the CB district requires a larger minimum lot size and is intended to service a larger geographic area. These commercial zones are relatively compact and have become established in certain locations where traffic generation and development have created a need for the services these zones provide. Expansion of these commercial nodes should be limited to maintain existing neighborhood character, while simultaneously accommodating the growing need for these services.

Neighborhood uses including retail stores, professional and business offices, banks and other financial institutions, and personal service establishments are proposed for these two districts. Minimum lot area and width for any use in the CB district are sixty thousand square feet (60,000 SF) and one hundred fifty feet (150'), respectively. Not more than thirty percent (30%) of the lot area may be occupied by buildings, and total

impervious coverage should not exceed seventy percent (70%). In the NB Zone, minimum lot area and lot width recommended are forty thousand square feet (40,000 SF) and one hundred feet (100'), respectively. Building coverage should not exceed seventy percent (70%). Controls should also be established to limit the overall size of buildings and the floor area that can be devoted to an individual tenant. These controls are necessary to maintain a building scale and mass, which are compatible with adjacent residential uses.

Industrial

The Township's current zoning ordinance identifies two (2) industrial districts distinguishable by the relative intensity and class of use permitted. The existing Light Industrial (M-1) district permits farms, retail and wholesale business in addition to the uses allowed in the more stringent Restricted Industrial (R-I) zone. It is recommended that the M-1 zone adjacent to Hamilton Township and north of West Jersey Avenue be converted to a high-density residential district due to recent developments, which consist of a mix of residential and commercial uses, and the proximity of sewerage. The remaining industrially zoned areas should be retained and the uses permitted governed by the appropriate zone designation described below.

The existing M-1 district north of the Atlantic City Expressway and adjacent to the FAATC facility, and the area east of Fire Road adjacent to Northfield should be designated as Light Industrial (LI). The M-1 district adjacent to Washington Avenue and the area south of the Black Horse Pike adjacent to Pleasantville should also be designated Light Industrial (LI). Permitted uses in this district would include manufacturing, light industrial and fabrication; professional, business and administrative offices; warehouses; retail and wholesale business; research, development and testing laboratories; vehicle repair facilities; used automobile sales and services; bulk laundries; auction houses; hotels; conference centers; day care and education facilities; and commercial recreation uses including swimming pools, water slides and water parks, miniature golf and golf driving ranges, batting cages, bowling alleys, indoor theaters, roller and ice skating facilities. The minimum lot size and lot width recommended for conventional development in the Light Industrial (LI) district are two (2) acres and one hundred fifty feet (150'), respectively, except for industrial parks which shall be governed by the controls in Section 225-70 of the Zoning Code.

The existing R-I district bisected by Ocean Heights Avenue between Zion Road and Steelmanville Road contains several industrial uses. The former Pinelands Park Landfill is located directly across from the existing R-I district and is now contained in the Recreation Park (RP) zone. The landfill was closed in August 1990. The landfill closure was certified in 1999 and the site is currently being converted to an 18-hole golf course.

The existing Township Zoning Map detailing the location of these zoning designations is shown as Figure 7-2.

C. Permitted Uses

The existing Township zoning scheme provides for the growth mandated as a result of the Pinelands Protection Act along with the commercial uses required to support the increased number of residents. Its purpose is to direct growth into appropriate developable areas and along major transportation corridors while recognizing the expansive environmentally sensitive areas in the Township.

NB Neighborhood Commercial §225-35

Principal	Restaurants, not including drive-in and quick-food restaurants Professional or business offices; banks Private or public schools, clubs and eleemosynary (charitable) uses Food markets; delicatessens, bakeries; liquor stores Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed Gasoline filling stations
Accessory	Uses and buildings customary and incidental to the primary use or building Private garages
Mods & Conditional	None

CB Community Business §225-36

Principal	Restaurants, not including drive-in and quick-food restaurants Professional or business offices; banks Private or public schools, clubs and eleemosynary (charitable) uses Food markets; delicatessens, bakeries; liquor stores Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
Accessory	Uses and buildings customary and incidental to the primary use or building Private garages

	A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal building on the subject premises
Mods & Conditional	Motels
	Gas stations subject to §225-71

HB	**Highway Business §225-37**
Principal	Restaurants, not including drive-in and quick-food restaurants
	Professional or business offices; banks
	Private or public schools, clubs and eleemosynary (charitable) uses
	Food markets; delicatessens, bakeries; liquor stores
	Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores
	Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
	Warehouses and office buildings
	Furniture, furnishings and household appliance stores
	Commercial recreation facilities, including outdoor and indoor theaters, miniature golf and golf driving ranges, batting cages, bowling alleys, indoor soccer, skating rinks and other uses similar to those noted herein
	Funeral homes
	Shopping centers
	Banks chartered under state or federal law, not including drive-in facilities
	Retail sales and retail services
Accessory	Uses and buildings customary and incidental to the principal use or building
	A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal building on the subject premises
Mods & Conditional	Service stations subject to §225-71
	Fast-food restaurants subject to §225-37D(2)
	Arcades subject to §225-37D(3)
	A public garage, new motor sales or leasing agency or used motor vehicle sales agency (provided that it is incidental to the sale of new motor vehicles) subject to §225-37D(4)
	Drive-in banking facilities subject to §225-37D(5)
	A motel or hotel which furnishes sleeping accommodations for tourists or short-term transient guests only; such uses shall not include rental units equipped with cooking or housekeeping facilities subject to §225-37D(6)

SHD Special Highway Development §225-37.1

Principal

Restaurants, not including drive-in and quick-food restaurants
Professional or business offices; banks
Private or public schools, clubs and eleemosynary (charitable) uses
Food markets; delicatessens, bakeries; liquor stores
Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores
Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
Gasoline filling stations
Motels
Warehouses and office buildings
Automotive repair and service uses
New and used car sales dealers, provided that no outdoor storage for sales vehicles is located closer than twenty-five (25) feet from the street line
Furniture, furnishings and household appliance stores
Resort recreation uses, limited to commercial swimming pools, miniature golf and golf driving ranges, campgrounds, bowling alleys and indoor theaters

Accessory

Uses and buildings customary and incidental to the principal use or building
A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal building on the subject premises

Mods & Conditional

None

RCD Regional Commercial Development §225-38

Principal

Offices for business, professional and governmental purposes
Light industry where the only activity involved is one of the fabricating or the assembling of standardized parts as contrasted to a processing activity which would involve a physical or chemical process that would change the nature and/or character of the product and/or raw material
The wholesaling or retailing of goods and/or services, including the warehousing or storage of goods
Scientific or research laboratories devoted to research, design and/or experimentation and processing and fabricating incidental thereto, provided that no materials or finished products shall be manufactured, processed or fabricated on said premises for sale, except such as are incidental to said laboratory activities or are otherwise permitted in this zone
Private schools

	Restaurants, not including drive-in and quick-food restaurants
	Professional or business offices; banks
	Private or public schools, clubs and eleemosynary (charitable) uses
	Food markets; delicatessens, bakeries; liquor stores
	Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores
	Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
	Gasoline filling stations
	Furniture, furnishings and household appliance stores
	A public garage, new motor sales or leasing agency or used motor vehicle sales agency (provided that it is incidental to the sale of new motor vehicles)
Accessory	Uses and buildings customary and incidental to the principal use or building
	Outdoor storage of materials incidental to such industrial uses as are permitted above, provided that the areas for such storage and the location and type of fencing used to separate them from other areas and screen them from view from public streets and from other non-industrial uses as approved by the Planning Board during site plan review
	A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal structure on the lot
Conditional Use / Dev. Option	Planned unit development subject to §225-38D(1)

MC Marine Commercial §225-39

Permitted	New and uses boat sales
	Marinas
	Buildings for the storage, repair and construction of boats, but excluding boats designed and/or used as permanent residential facilities
	Marine supply shops
Accessory	Uses and buildings customary and incidental to the principal use or building, including but not limited to:
	Outdoor winter storage boatyards and buildings for indoor storage of boats
	Retail sales of boating and fishing equipment
	A single-family dwelling or apartment dwelling unit, provided that no more than two (2) such units shall be permitted per lot
	Restaurant to a marina, except that such use shall be limited to 10% of the total floor area of the principal building(s) on the lot or 2,500 square feet of floor area, whichever the lesser

Mods & Conditional	None

M-1 Light Industrial §225-40

Permitted	Manufacturing of light machinery, such as small machine parts, typewriters, calculators and other office machines
	Fabrication of metal and wood products, such as baby carriages, bicycles, metal foil, metal furniture, musical instruments, sheet metal products and toys, boxes, cabinets and woodworking and furniture
	Fabrication of paper products, such as bags, book binding, boxes and packaging materials, office supplies and toys
	Business offices
	Research laboratories comprising any of the following: biological, chemical, dental, electronic, pharmaceutical and general
	The warehousing and storage of goods
	Other permissible industry, comprising any of the following: brush and broom manufacturing, plastic products, electric light and power and other utility company installations, electronic products, farm machinery, glass products manufacturing, jewelry manufacturing, including gem polishing, leather goods manufacturing (except curing, tanning and finishing of hides), pottery and ceramic products manufacturing and thread and yarn manufacturing
	In addition to the above listed uses, any industrial use not inconsistent with the above may be permitted, subject to §225-40(A)(8)
	Farms, including one single dwelling unit
	Retail services, retail and wholesale sales
	Commercial recreation
	Hotels and conference centers
	Education facilities, including commercial, private and public schools
	Bulk laundry processing
	Auction houses
	Branch banks, including drive-in banking facilities, subject to §225-37D(5)(e)
Accessory	Uses and buildings customary and incidental to the principal use or building
	Private garages
	Cafeterias
	Customary and conventional farm accessory uses not otherwise prohibited in this chapter
	Day care when established as an integral component of a principal use permitted in this district
Mods & Conditional	Industrial parks as specified in §225-70
	Planned unit development subject to §225-38D(1)
	Vehicle repair subject to §225-37D(4)
	Used auto sales and service subject to §225-37D(4)

Towing and storage of motor vehicle subject to §225-71.1

R-I Restricted Industrial §225-40

Permitted

Manufacturing of light machinery, such as small machine parts, typewriters, calculators and other office machines

Fabrication of metal and wood products, such as baby carriages, bicycles, metal foil, metal furniture, musical instruments, sheet metal products and toys, boxes, cabinets and woodworking and furniture

Fabrication of paper products, such as bags, book binding, boxes and packaging materials, office supplies and toys

Business offices

Research laboratories comprising any of the following: biological, chemical, dental, electronic, pharmaceutical and general

The warehousing and storage of goods

Accessory

Uses and buildings customary and incidental to the principal use or building

Private garages

Cafeterias

Customary and conventional farm accessory uses not otherwise prohibited in this chapter

Day care when established as an integral component of a principal use permitted in this district

Mods & Conditional

Industrial parks as specified in §225-70

Planned unit development subject to §225-38D(1)

Vehicle repair subject to §225-37D(4)

Used auto sales and service subject to §225-37D(4)

Towing and storage of motor vehicle subject to §225-71.1

RB Regional Business §225-41

Permitted

Offices for business, professional and governmental purposes

Limited manufacturing, provided that such use does not require bulk storage facilities in excess of twice the floor area of the primary structure and subject to §225-41A(2)

Retail sales and retail services

Laboratories (research, experimental and testing) which are not noxious or hazardous

Warehousing and distribution facilities when ancillary to an office or limited manufacturing use

Shopping centers

Restaurants, not including drive-in and quick-food restaurants

Professional or business offices; banks

Private or public schools, clubs and eleemosynary (charitable) uses

Food markets; delicatessens, bakeries; liquor stores

Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores

	Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
	Warehouses and office buildings
	Furniture, furnishings and household appliance stores
	Commercial recreation facilities, including outdoor and indoor theaters, miniature golf and golf driving ranges, batting cages, bowling alleys, indoor soccer, skating rinks and other uses similar to those noted herein
	Funeral homes
Accessory	Uses and buildings customary and incidental to the principal use or building
	Outdoor storage of materials incidental to such industrial uses as are permitted above, provided that the area for such storage and the location and type of fencing used to separate them from other areas and screen them from view from public streets and from other no industrial uses shall be as provided by the Planning Board during site plan review
	A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal structure on the lot
Mods & Conditional	Fast-food restaurants subject to §225-37D(2)
	Arcades subject to §225-37D(3)
	Drive-in banks subject to §225-37D(5)

ASO	**Auto Services Overlay §225-42**
Permitted	Auto body and auto repair
	Wholesale and retail sales of automobiles and auto parts displayed out of doors in accordance with a site plan approved by the Planning Board

PO-1	**Professional Office §225-42.1**
Permitted	Offices for business, professional and governmental purposes
	Administrative offices of commercial and industrial partnerships, companies or corporations, subject to §225-42.1A(2)
Accessory	Uses and buildings customary and incidental to the principal use or building
	Recreational facilities and cafeterias provided for employees when integrated into a planned office development incidental to the primary office use
	Security watch stations which may contain cooking and sleeping accommodations when integrated and incorporated into the primary building
	Repair facilities for the maintenance of vehicles used in the operation of a primary use
	Storage garages for vehicles used in the operation of the primary use
Mods & Conditional	None

PO-2	**Professional Office §225-42.2**
Permitted	Offices for business, professional and governmental purposes
	Administrative offices of commercial and industrial partnerships, companies or corporations, subject to §225-42.1A(2)
	Wholesaling, warehousing and distributing, excluding retail or wholesale sale of lumber, ice, coal, petroleum, quarried or mined material or similar bulk materials
	Limited manufacturing, subject to §225-41A(2)
	Banks chartered under state or federal law, not including drive-in facilities
	Restaurants, not including fast-food restaurants
	Indoor athletic and recreational facilities
Accessory	Uses and buildings customary and incidental to the primary use or building
	Recreational facilities and cafeterias provided for employees when integrated into a planned office development incidental to the primary office use
	Security watch stations which may contain cooking and sleeping accommodations when integrated and incorporated into the primary building
	Repair facilities for the maintenance of vehicles used in the operation of a primary use
	Storage garages for vehicles used in the operation of the primary use
Mods & Conditional	Office parks subject to §225-70.1

CRW	**Conservation-Recreation-Wetland §225-27**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship

	Golf courses
	Stables and horse farms
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage
Mods & Conditional	Marinas subject to §225-27D(3) and §225-39

RA	**Rural Agriculture §225-27**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Stables and horse farms
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage
Mods & Conditional	Marinas subject to §225-27D(3) and §225-39

R-1	**Residential §225-28**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage

Mods & Conditional	Planned adult community

R-2	**Residential §225-30**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage
Mods & Conditional	Cluster option
	Planned unit development subject to Article VI

R-3	**Residential §225-31**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage
Mods & Conditional	Cluster option subject to Article IX

R-4	**Residential §225-32**
Principal	Single-family dwellings
	Churches and other similar places of worship
	Nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses and buildings customary and incidental to the principal uses
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office use

Mods & Conditional	Multifamily residential subject to Article IX

R-5	**Residential §225-33**
Principal	Single-family dwellings
	Churches and other similar places of worship
	Nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses and buildings customary and incidental to the principal uses
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office use
Mods & Conditional	None

R-5 Apt	**Apartment Residential §225-34**
Principal	Single-family dwellings
	Churches and other similar places of worship
	Nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
	Multifamily residential subject to Article IX
	Planned unit development subject to §225-34D
Accessory	Uses and buildings customary and incidental to the principal uses
Mods	Planned unit development

RP	**Recreation Park §225-43**
Principal	Golf course
	Commercial recreation
	Municipal parks, playgrounds and other such municipal buildings and uses as are deemed appropriate and necessary by the Township Committee
Accessory	Uses and building customary and incidental to the principal use or building
Mods & Conditional	None

RG-1	**Residential §225-44**
Permitted	Farming
	Single-family detached dwellings
	Public parks, playgrounds, active and passive recreation
Accessory	Uses customary and incidental to the principal uses
	Roadside stands, not larger than 5,000 SF, for the sale of produce primarily raised and produced by the owner of the premises, provided that said roadside stand is located 50 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
Mods & Conditional	Home occupations subject to §225-44D(1)

RG-2	**Residential §225-45**
Permitted	Farming
	Single-family detached dwellings
	Public parks, playgrounds, active and passive recreation
Accessory	Uses customary and incidental to the principal uses
	Roadside stands, not larger than 5,000 SF, for the sale of produce primarily raised and produced by the owner of the premises, provided that said roadside stand is located 50 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
Mods & Conditional	Home occupations subject to §225-44D(1)

RG-3	**Residential §225-46**
Permitted	Farming
	Single-family detached dwellings
	Public parks, playgrounds, active and passive recreation
Accessory	Uses customary and incidental to the principal uses
	Roadside stands, not larger than 5,000 SF, for the sale of produce primarily raised and produced by the owner of the premises, provided that said roadside stand is located 50 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
Mods & Conditional	Home occupations subject to §225-44D(1)

RG-4	**Residential §225-47**
Permitted	Single-family detached dwellings
	Public parks, playgrounds, active and passive recreation
Accessory	Uses customary and incidental to the principal uses
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
Mods & Conditional	Home occupations subject to §225-44D(1)
	Public and private schools, churches, chapels, synagogues or similar houses of worship subject to §225-47D(2)
	Two-family dwellings subject to §225-47D(3)
	Cluster development subject to §225-53.10

RG-6	**Residential §225-49**
Permitted	Single-family detached dwellings
	Public parks, playgrounds, active and passive recreation
Accessory	Uses customary and incidental to the principal uses
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes

Mods & Conditional	Home occupations subject to §225-44D(1) Public and private schools, churches, chapels, synagogues or similar houses of worship subject to §225-47D(2) Two-family dwellings subject to §225-47D(3) Single-family attached dwellings subject to §225-48D(2) Garden apartments subject to §225-49D(2) Cluster development subject to §225-53.10

Chapter 8: Future Projections

A. POPULATION

Based on the historical growth experienced in Egg Harbor Township and Atlantic County over the past twenty (20) years and designation as a Pinelands Regional Growth Area, it is anticipated that the Township will experience a level of growth similar to the growth of 1980-2000. Sufficient land is still available to provide residential housing throughout the regional growth area and in several developments in the CAFRA area. In addition, as of December 2001, the Township estimates that there are approximately 3,000 to 3,500 lots that have been approved by the Planning Board that have not yet been built upon. The development of these approved lots and continued approvals on vacant land should result in a consistent level of growth for the next decade. The Township should anticipate the following population increases through this time period.

Table 8-1
Population Estimates 2001 Through 2010
for Egg Harbor Township, Atlantic County, and State of New Jersey

Year	Egg Harbor Township			Atlantic County			New Jersey		
	Population	Increase	Percent	Population	Increase	Percent	Population	Increase	Percent
2000	30,726	--	--	252,552	--	--	8,414,350	--	--
2001	31,571	845	2.8%	254,825	2,273	0.9%	8,484,431	70,081	0.8%
2002	32,439	1,713	5.6%	256,953	4,041	1.6%	8,532,151	117,801	1.4%
2003	33,169	2,443	8.0%	258,108	5,556	2.2%	8,582,637	168,287	2.0%
2004	33,915	3,189	10.4%	259,371	6,819	2.7%	8,624,709	210,359	2.5%
2005	34,423	3,697	12.0%	260,600	8,048	3.2%	8,662,100	247,750	2.9%
2006	34,853	4,127	13.4%	263,917	11,365	4.5%	8,717,267	302,917	3.6%
2007	35,288	4,562	14.8%	266,947	14,395	5.7%	8,767,753	353,403	4.2%
2008	35,641	4,915	16.0%	269,900	17,348	6.9%	8,828,400	414,050	4.9%
2009	35,949	5,223	17.0%	272,251	19,699	7.8%	8,885,554	471,204	5.6%
2010	36,255	5,529	18.0%	274,400	21,848	8.7%	8,937,200	522,850	6.2%

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, December, 2001 and http://www.census.gov/population/cencounts/nj11900909.txt. Compiled by Mott, Polistina & Associates, December, 2001.

Population projections for Egg Harbor Township, Atlantic County and New Jersey are predicted to continue to increase at approximately the same rate through the year 2010, as shown in Figure 8-2.

The population density in the Township is expected to increase by 82 persons per square mile, or 18 percent between the years 2000 and 2010, as shown in Table 8-2. The population densities for Egg Harbor Township and Atlantic County are shown in Table 8-2.

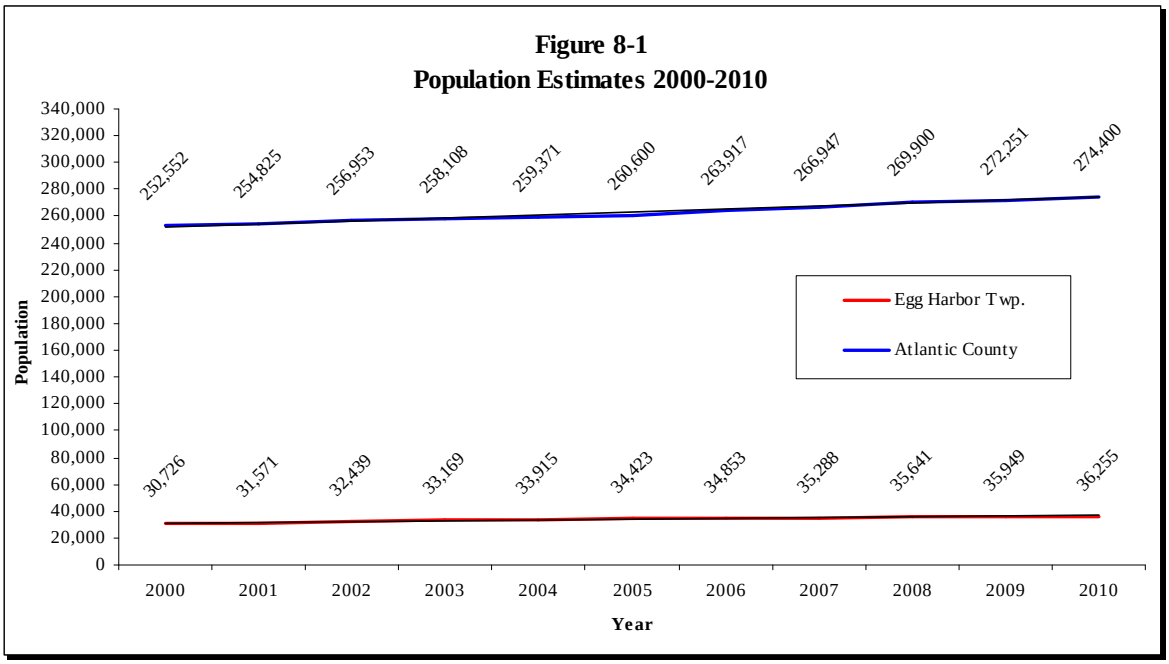


Table 8-2
Population Densities, 2000 and 2010

	2000 Pop.	2000 Pop/Sq. Mile	2010 Pop.	2010 Pop/Sq. Mile	Density increase 2000-2010	% Density increase 2000-2010
Egg Harbor Twp.	30,726	457	36,255	539	82	18%
Atlantic County	252,552	450	274,400	489	39	8.7%

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation. Compiled by Mott, Polistina & Associates, December, 2001.

B. HOUSING

The predominant housing that Egg Harbor Township has seen over the last ten (10) years is single-family residential dwellings on one-fifth (1/5) to one (1) acre lots. The majority of housing has been in the regional growth area but development of one (1) acre lots has continued at a steady pace in the CAFRA area. The following is a partial listing of major single-family residential developments with greater than twenty (20) lots which have been approved in the Township since 1990:

Table 8-3
Major Developments Approved since 1995

Project Name	# of Units	Project Name	# of Units
Little Mill	303	Aldon Homes	45
Sea Pines Estates	250	Oak Tree Estates	45
Harbor Pines	246	Poplar Corners	45
Crystal Lakes	200	Harbor Development	41
Meadow Lakes	190	Pine Ridge	37
Marshall Estates	186	Arbors at Wood Hollow	36
La Costa Lake	177	Fernwood North	36
Cedarcrest	162	Oak Knoll	35
Equestrian Estates	141	Liberty Walk	34
High Ridge (The Reserve)	134	Devon Ridge	32
Meadow Run	133	Hideaway Estates	31
Fox Trail Ridge	123	Poplar Woods	31
Fernwood Hills	108	Thousand Oaks	30
Shires West	99	Hunters Run	29
Wood Hollow I	93	King's Mill	28
Harbor Acres, phases 2-5	90	Wood Hollow II	28
J & M Land	87	West Jersey Assoc.	25
The Pines	83	Anchorage Poynte	24
Eagles Glen	82	Atlantic Chase II	24
Greentree	81	Jeffrey Jerman	24
Greenwood Village	78	Kendall Estates	24
Country Aire	75	Mill Road Farms	24
Heritage Commons	75	Oakland Estates	24
Winterberry	72	Paul Tilton	24
Leap-Zion Subdivision	71	Rolling Hills	24
IM Land – Hampton Ct.	67	Woodcrest II	24
Reega Park	65	Comfort Oaks	23
Willow Estates	65	Harbor Acres, phase 1	23
High Ridge West	64	Hilltop Estates	22
SMA Land	64	Stone Mill Estates	22
Ocean Aire	59	Bartley Pines	20
Atlantic Chase I	50	Tranquility Estates	20
Pennington Estates	50	***TOTAL***	***4,757***

Due to the large number of approved lots and continued activity at the Planning Board, Egg Harbor Township expects to issue a consistent number of building permits each year. Based on the current market in the Township and continued developments in Atlantic City, we anticipate the following increases in housing throughout the next decade:

Table 8-4
Number of Housing Units, 2000-2010

	Egg Harbor Twp.	Atlantic Co.	New Jersey
2000	12,067	114,090	3,310,275
2001	12,637	115,231	3,340,067
2002	12,936	116,372	3,363,239
2003	13,201	117,513	3,386,411
2004	13,466	118,540	3,406,273
2005	13,635	119,680	3,422,824
2006	13,781	120,821	3,449,307
2007	13,925	121,848	3,472,478
2008	14,046	122,989	3,498,961
2009	14,143	124,016	3,522,133
2010	14,574	125,043	3,542,166

C. ECONOMIC

Economic projections remain strong due to expanding labor markets in Atlantic City, expansion of the FAA Technical Center / A.C. International Airport in the Township, and continued retail growth in both Egg Harbor and Hamilton Townships. Table 8-5 shows the number of employed residents in the Township, County and State for 2000 and projections for the years 2001 through 2010.

Table 8-5
Number of Employed Residents
Egg Harbor Township, Atlantic County, State of New Jersey

Year	Egg Harbor Twp.	Atlantic County	New Jersey
2000	13,921	118,222	4,030,500
2001	14,311	122,242	4,119,171
2002	14,673	126,261	4,207,842
2003	15,007	130,280	4,296,513
2004	15,341	134,182	4,381,154
2005	15,578	138,200	4,464,000
2006	15,772	140,211	4,514,160
2007	15,967	142,339	4,558,496
2008	16,134	144,500	4,604,800
2009	16,274	146,595	4,651,197
2010	16,717	148,600	4,701,500

* Includes adjustment for seasonal employment.
Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, Compiled by Mott, Polistina & Associates, January, 2002.

Projected Employment 2000-2010

Egg Harbor Township continues to exhibit strong growth as evidenced by the amount of residential and commercial construction. This development consists of a mix of residential and commercial facilities. Commercial and industrial facilities comprise 27% of the total ratables, whereas residential use represents 64% of the ratable total. New housing starts in 1999, 2000 and 2001 exceeded 500 units each year.

Construction, retail trade, personal service, entertainment/recreation and professional services were the primary industries in 1990. Only 17% of the work force was employed within the municipality, 92%, however, worked within Atlantic County. The Atlantic County report titled Growth Trends projects a 3% increase in service employment between 1990 and 2005.

Major construction in Atlantic City including casino expansion and the Convention Center have added significantly to the region's economy and prosperity. Construction of major commercial and service facilities, improvements to the FAA Technical Center, including 30,000 square feet terminal expansion of the Atlantic City International Airport will continue to increase employment opportunities in the Township.

Total employment within the Township during the next ten (10) years is expected to increase considerably. This projection is based on recent employment and development trends and conservatively assumes a continuation of the current growth pattern.

D. EDUCATION

Education is a primary focus for Egg Harbor Township due to the explosion of residential growth. The single-family residential development being experienced in the Township results in a tremendous increase in school aged children. The projected student enrollment, based on the Egg Harbor Township Board of Education's Cohort Survival Study, is shown in Table 8-6. The actual population as of October 2001 was 6,116, which is already beyond the projected enrollment for 2002.

Table 8-6
Number of Persons Enrolled in Public Schools
Egg Harbor Township

Year	Total Enrollment
2002	6,041
2003	6,276
2004	6,531
2005	6,774
2006	7,045
2007	7,222
2008	7,438
2009	7,600
2010	7,717

Source: EHT Board of Education, January, 2002.

A $56.4 million bond referendum was passed in 2000 to provide for improvements to existing schools and construction of new schools. This funding was to be utilized for the following improvements:

Table 8-7
Proposed Improvements

Improvements	Amount
Construction of a new 3-4 elementary school	$21,800,000
Upgrades to Davenport	$2,300,000
Upgrades to Swift School	$5,600,000
Upgrades to Slaybaugh School	$2,900,000
Expansion of High School	$23,800,000

Source: EHT Board of Education, January, 2002

Much of the student population is served by approximately twenty (20) modular classrooms located at the schools. The Board of Education expects to continue to utilize these modular classrooms well into the future because it is impossible to keep up with increases in enrollment. The Board expects that the improvements provided for in the $56 million bond referendum will be at capacity once construction is complete in 2004-2005 so that the modular classrooms will still be needed. Class sizes and quality of education for the Township's youth have been of primary concern during the planning process undertaken for the downzoning of the regional growth area and master plan.

E. TRAFFIC

The increase in traffic is another major concern for the Township in 2001. Many intersections throughout the Township are currently failing and in need of major improvements to provide widening and signalization. The $1.7 million project to

improve the English Creek Avenue / West Jersey Avenue / Reega Avenue intersection has been awarded and will provide much needed upgrades to this intersection. Many other roadways and intersections will need to be improved throughout the decade that will be discussed in detail in the circulation element of the master plan. Some intersections that are failing include the following:

Fire Rd. & Hingston Ave.
Fire Rd. & Mill Rd.
Fire Rd. & Washington Ave.
English Creek Ave. & Dogwood Ave.
Ocean Heights Ave. & Leap St.
Mill Rd. & Spruce Ave.
Mill Rd. & Ridge Ave.
Bargaintown Rd. / Steelmanville Rd. / Poplar Ave.

With an estimate of ten (10) trips per day per residential dwelling along with continued commercial development, the traffic on Township roadways will be a major problem. Funding for improvements to roadways and intersections must be part of the planning needed for the Township. The Township will be requiring pro-rata share contributions for off-tract improvements in conjunction with the circulation element, but will also need to secure county and municipal funding for the improvements.

Chapter 9: Statement of Goals, Objectives and Assumptions

The Municipal Land Use Law, at N.J.S.A. 40:55D-28 requires that the Master Plan contain" a statement of objectives, principles, assumptions, policies and standards" which guide the physical, economic and social development of the municipality. The individual elements of the Master Plan implement the objectives stated below.

This section updates and refines the specific objectives of the previously adopted Master Plan, providing a framework for balancing preservation and economic development. The following specific objectives advance the broader goals of this Master Plan, which are to protect the public health, safety, morals and general welfare.

1. To encourage decision-makers and/or municipal action to guide the appropriate use or development of lands within the Township.

2. To secure safety from fire, flood, panic and other natural and man-made disasters.

3. To provide adequate light, air, and open space.

4. To ensure that development within the Township that does not conflict with the development and general welfare of neighboring municipalities, the County, the State, Federal Aviation Administration, the Pinelands Comprehensive Management Plan, and CAFRA as a whole.

5. To promote the establishment of appropriate locations within the Township for agricultural, residential, recreational/open space, governmental, commercial and industrial uses.

6. To promote the conservation of open space and valuable natural resources and to prevent urban sprawl and degradation of the environment through improper use of land.

7. To promote a desirable visual environment through conservation and preservation of valuable natural features.

8. To promote the conservation of historic sites, open space and valuable natural resources, and to prevent sprawl and the degradation of the environment that may occur through improper use of land.

9. To encourage a balance of land residential, commercial, industrial, and agricultural development, in areas and at intensities compatible with environmental and natural resource capabilities.

10. To promote appropriate population densities and concentrations which promote the well being of the residents, neighborhoods, the regions, and the preservation of the environment.

11. To encourage the location and design of transportation routes which promote the free flow of traffic on the Township's primary roads.

Furthermore, the following policies and principals provide the basis for the Land Use Plan (Chapter 9):

1. To guide residential development into areas which are accessible and either suitable for on-site septic systems or serviced by existing and/or future public sewerage facilities.

2. To encourage development near existing or readily extendable infrastructure, particularly sanitary sewers and public water distribution systems.

3. To maintain, preserve and upgrade the quality of existing residential and commercial areas.

4. To provide the reasonable opportunity for an appropriate variety and choice of housing to meet the needs, desires and resources of all categories of people who desire to live within the municipality.

5. To recognize existing patterns and densities of development and encourage future growth that is contiguous with existing developed areas and compatible with its established character and consistent with present health and environmental requirements pertaining to on-site septic disposal.

6. To protect and enhance the quality of life and living environment which has historically been an essential part of the character of the community.

7. To consider and evaluate innovative development proposals that would enhance and protect environmental features, minimize energy usage and encourage a creative design that is also consistent with the other policies of the Township.

8. To advance innovative public and private partnerships that coordinate procedures and activities that lessen the cost of development and promote the most efficient use of land.

9. To discourage development in flood hazard areas, wetlands areas, areas with soils having poor drainage characteristics, and environmentally sensitive areas.

10. To encourage and protect the continued development of agricultural uses within the Township.

11. To recognize the ecologically sensitive characteristics of the Pinelands and to encourage only those uses which would be compatible with the Pinelands Comprehensive Management Plan.

12. To promote the preservation and conservation of open space and environmentally sensitive areas through coordination of the Township' s planning efforts with other entities and governmental agencies.

13. To provide, in conjunction with other governmental entities, a circulation system designed to alleviate congestion and promote safe circulation.

14. To provide land for commercial and industrial development that is convenient to a regional circulation system.

15. To promote the purposes of the State Development and Redevelopment Plan, including limiting sprawl by concentrating development in cores, nodes, and /or centers.

16. To promote and foster a "sense of community" through physical design. This would be accomplished by permitting mixed uses, design of a good circulation system for all modes of transportation, recognition and accommodation of the pedestrian, and the development of different uses in close proximity to public spaces and civic buildings as community focal points.

Assumptions:

1. The casino industry and development at the FAATC facility and Atlantic City International Airport will continue to affect growth in Egg Harbor Township.

2. The population of Egg Harbor Township and Atlantic County will continue to grow.

3. The Township will be able to guide its growth in accordance with the Municipal Land Use Law and will have a major input into any proposed County, State or regional development policies that may affect the Township.

4. Planning for public sewerage facilities over the next five (5) years will provide sufficient capacity to accommodate new growth that is orderly and avoids sprawl. Expansion of these facilities will be a function of private land development, documented health hazards and policy decisions by State, County and local agencies.

5. The Township's critical environmental areas will be maintained by governmental legislation affecting growth and development.

Chapter 10: Conservation Element

Although not a mandatory component of a master plan, the conservation element is one the most important optional plan elements authorized under the enabling legislation. According to NJSA 40:55D-28(b), a master plan may include the following elements:

- Housing Plan
- Circulation Plan
- Utility Service Plan
- Community Facilities Plan
- Recreation Plan
- Conservation Plan
- Economic Plan
- Historic Preservation Plan
- Appendices or separate reports containing the technical foundation for the master plan and its constituent elements
- Recycling Plan
- Farmland Preservation Plan

Due to its location within the Pinelands ecosystem and the Coastal Plain physiographic province, Egg Harbor Township exhibits a diversity of natural resources, which provide unique recreation and open space opportunities. The Pineland National Reserve encompasses approximately half of the Township's land area. It is recognized as a nationally significant resource because of its unique groundwater reservoirs, geology, flora and fauna. The Pinelands National Reserve is also recognized as an International Biosphere Reserve under the United Nations Man and the Biosphere Program.

In recognition of the unique characteristics existing in the Township, a Natural Resources Inventory (NRI) was completed in July 1987. The NRI describes in narrative and graphic form geohydrologic conditions, soils, vegetation and wildlife. With the assistance of a New Jersey Department of Environmental Protection grant, the NRI was updated in 1991. This update involved a series of field surveys that resulted in a final report identifying critical habitats for threatened and endangered species. The updated NRI and supplemental threatened and endangered species habitat study have provided the Township with the basis to establish regulatory policies for the protection and maintenance of these unique environmental resources. In 1993, the Township adopted an Open Space and Recreation Plan. This plan also identified the unique and natural resources in the Township. An updated inventory utilizing the information provided in the NTR from 1991 is included in this conservation element.

National Wild and Scenic Rivers System

Following over three (3) years of work by the National Park Service and a task force comprised of representatives form municipal, state and federal agencies, river interests

and local residents, segments of the Great Egg Harbor River (GEHR) and its tributaries were designated into the National Wild and Scenic Rivers system on September 29, 1992. This designation is unique not only because it will ensure the consistency of federally funded, licensed and permitted activities with the goals of the Great Egg Harbor River Wild and Scenic River Study (1991), but also because it represents the first National Scenic and Recreational River in the State of New Jersey.

The lower GEHR and its tributaries contain large expanses of ecologically significant tidal marshlands and bottomland hardwood swamp and as well as sites with rare plants or plant communities recognized by Federal and State agencies and the Pinelands Commission. This area also serves as critical nursery habitat and spawning ground for anadramous fish, as well as resident estuarine and transient marine fish. The lower GEHR is also one of only four areas in the State where commercially important quantities of seed oyster still exist. This river segment provides breeding habitat for the Peregrine Falcon as well as the Southern Bald Eagle, both federally endangered species. In addition to its ecological importance, the GEHR is the largest navigable river in the New Jersey Pinelands. The lower GEHR provides excellent recreational opportunities for boating, fishing and hunting.

In addition to the 39.5 miles of the main stem, the following tributaries are also included under the Wild and Scenic River designation:

- Miry Run – from its confluence with Great Egg Harbor River to Asbury Road approximately 1.7 miles, as a recreational river;
- English Creek – from its confluence with Great Egg Harbor River to Zion Road, approximately 3.5 miles, as a recreational river;
- Lakes Creek – from its confluence with Great Egg Harbor River to the dam, approximately 2.2 miles, as a recreational river;
- Patcong Creek – from its confluence with Great Egg Harbor River to Garden State Parkway, approximately 2.8 miles, as a recreational river.

The designation of the Great Egg Harbor River into the Wild and Scenic Rivers system provides formal recognition of the unique value of this resource. Area residents have long recognized the importance of this river as a recreational asset. In conjunction with this designation, the Township has prepared a local river management plan for incorporation into the conservation element of the master plan.

NATURAL RESOURCES INVENTORY

A. Geographic Characteristics

Physical Location

The mainland portion of Egg Harbor Township is located in the east central portion of Atlantic County between longitudes 74º29' and 74º43' West, and latitudes 39º17'30" and 39º28' North. There are two detached portions of the Township separated from the larger mainland section by the eastern bordering municipalities of Pleasantville, Northfield, Linwood and Somers Point. These regions consist predominantly of salt marsh tidal wetlands and include West Atlantic City, Anchorage Point and Seaview Harbor.

Egg Harbor Township covers 67.27 square miles, the second largest municipality by size in Atlantic County. Bordering the Township on the north are Galloway Township and Absecon. On the west side is Hamilton Township, and to the south is Estell Manor. To the east, the Township is bordered by the tidal marsh and bay system which separate the mainland from the Absecon Island communities of Atlantic City, Ventnor, Margate and Longport. The eastern bordering municipalities discussed in the previous paragraph were once part of the Township, but their more urbanized character and specialized problems as mainland suburbs of Atlantic City led to their independence. They occupy the first mainland high ground and straddle the historic main transportation corridor – U.S. Route 9.

Topography and Major Patterns of Surface Drainage

Egg Harbor Township lies within the southeastern region of the New Jersey Coastal Plain. The topography is characterized by gently sloping, less prominent uplands which divide the four major drainage basins of the Township. Precipitation throughout the Township that does not evaporate will either percolate into the ground or runoff into the lowland areas where it will drain through various streams out of the Township. A stream and its tributaries ("stream network") drain a distinct area known as a drainage basin or watershed. Each drainage basin is separated from its neighboring drainage basin by a ridge of high ground known as a drainage divide. The highest elevation in the Township is 78 feet above sea level, located near a gravel it between Laurel Memorial Cemetery and the South Branch of Absecon Creek near the northwest corner of the Township. This exemplifies the trend of topography within the Coastal Plain which slopes generally downward toward the south and east.

Most streams and their associated tributaries transform dramatically from their source to their lower elevations close to the mouth. For example, streams in southern New Jersey generally become more swampy as they flow seaward. Consequently, the streams of Egg Harbor Township can be divided into upper and lower segments. The upper segments of streams typically cut steeper, more narrow stream valleys; possess relatively lower volumes of water; and may dry up in the summer. The lower segments of streams flow

throughout the year through wider swampy valleys while possessing relatively large volumes of water. In addition, the upper segments are only fairly well drained while the lower segments tend to be more poorly drained and have a tendency to flood during the later winter and early spring when groundwater level are normally at their peaks.

The Township can be separated into upland and lowland regions based upon topographic elevation. The characteristics that differentiate each region also coincide with differences in soils, surface water drainage patterns, forest vegetation, and wildlife. The soils found in the upland regions are well drained to moderately well drained and usually possess lower water tables. The soils of the lowland regions are moderately well to poorly drained, with high water tables and in some sections tidal inundation. The soil survey of Atlantic County is the best reference for information specific to each soil type and its location within the Township.

The upland areas which represent drainage divides will determine the directional flow of stormwater runoff and the extent to which each surface water feature contributes to the drainage of the larger area. The watersheds delineated by these drainage divides are categorized in a hierarchical order from major to secondary and so on, until the smallest land area and associated stream segment can be delineated. The primary patterns of surface water drainage within the Township are directed toward either the Great Egg Harbor River to the south or Absecon Creek to the north. Patcong Creek is a major tributary to the Great Egg Harbor River, however, due to the large size of the Patcong Creek watershed within the Township, it is considered a major watershed for purposes of this inventory. The Watersheds Map (Figure 10-1) delineates the major and secondary watersheds while the Water Bodies Map (Figure 10-2) delineates the individual streams within the Township.

Water quality within each sub-basin and major watershed within the Township is a direct result of activities which occur within that basin. None of the three major watershed areas lie entirely within Egg Harbor Township, however, numerous sub-basins are completely within Township boundaries. Decisions are made locally which will encourage or discourage development within each watershed based upon the zoning districts established by the Egg Harbor Township Development Plan. Land use plans can set aside certain areas for preservation or management. Such land use and planning decisions are based upon numerous factors, only some of which are environmental considerations. Transportation routes, existing population centers, existing or proposed public utilities; these are just a few of the factors which influence the placement of zoning districts. From an environmental viewpoint, the best way to view the Township is on a “by watershed” basis. Each watershed contains a variety of terrain, vegetation complexes, wildlife habitats, and other unique features which set it apart from all others. The ability to preserve these critical areas depends upon the willingness of Township officials to actively pursue environmental management as a means of controlling development. In the past, zoning districts were delineated for convenience along roads or other natural features without regard for watershed boundaries. These boundaries should, however, be of primary concern when making such decisions in the future.

The watersheds of the tributary network within Egg Harbor Township share the general characteristics of streams having low flow gradients with broad, shallow floodplains and extensive swamp areas with characteristically dense lowland vegetation. Swampy conditions can also occur in upland stream segments, particularly in areas where natural streams have been dammed. An example of such a "man-induced" wetland or swamp area is located on English Creek above the dam at Mill Harkensfield Road, just west of English Creek Avenue. Any future damming or stream detention might lead to the expansion of swampy conditions upstream of such construction in other areas.

The forest vegetation of the uplands is dominated by the oak-pine, pine-oak forests. Non-forest upland areas include agriculture and urban development such as are found in upper sections of the South Branch of Absecon Creek and the Patcong Creek tributaries. The lowland forests contain species of the pine-oak, oak-pine, cedar swamp, hardwood swamp and pitch-pine lowland complex. The non-forest areas are comprised of streams, ponds, lakes, coastal bays, bogs, marshes and lands developed for agricultural and urban uses.

The wildlife of the upland zones is characterized generally by open-land and woodland species. These species also periodically inhabit or utilize the lowland zones. The wildlife found in the lowland zones includes birds and mammals that normally inhabit wet areas such as ponds, marshes and swamps. The upland areas of the Township can be generally delineated at about the 50-foot contour line on the Topographic Map (Figure 10-3).

The Great Egg Harbor River flows in a southeasterly direction towards the Great Egg Harbor Bay and receives drainage from the tributaries of Miry Run, Perch Cove Run, Matthew Run, Powell Creek, Flat Creek, Nell Run, English Creek, Lakes Creek, and other unnamed tributaries and minor streams. The river forms the southern boundary of the Township and is flanked by extensive tidal salt marshes. For this reason, all land bordering the Great Egg Harbor River and the lower reaches of its tributaries may be subject to extensive flooding as a result of ocean tidal influences, especially during the passage of coastal storms or hurricanes. Therefore, stream flows alone are not sufficient indicators for predicting flood hazard potential. The Flood Hazard Areas Map (Figure 10-4) should be used as a guide to development, as it includes areas subject to tidal flooding and river or stream floodplain areas.

Patcong Creek flows in a southerly direction and receives flow from Blackmans Branch, Mill Branch and Cedar Branch before emptying into Bargaintown Pond. Below the pond, Patcong Creek receives drainage from numerous unnamed streams and becomes tidal for a distance of about three miles prior to emptying into the Great Egg Harbor Bay.

The smallest tributary network system in Egg Harbor Township is located in the northern region of the Township. This system consists of a number of small streams converging to form Absecon Creek. The North and South Branches of Absecon Creek empty into the Atlantic City Reservoir, which is a major surface water feature within the Township.

The easterly "bay area" portion of the Township consists of islands and peninsulas of the salt meadows and is interspersed with numerous coastal lagoons. These land areas are below the 10-foot elevation datum and are subject to frequent tidal flooding.

Climatological Conditions

Climatic data is relevant to an environmental inventory primarily because of the effect climate has upon other parameters, such as the amount and seasonal distribution of rainfall, which in turn affects streamflow, vegetation, soils, water quality, and groundwater levels. Likewise, temperature data is important for determining the duration of the growing season for crops and indigenous vegetation species, and the ability of soils to absorb, drain, or retain water.

Climatic records for Atlantic County were compiled at the Atlantic City Weather Bureau Station located at the FAA Technical Center in Pomona. The station is located near the northern border of Egg Harbor Township approximately ten miles west-northwest of Atlantic City. Climatological data has been collected at the FAATC facility since 1931 and generally presents the weather conditions of the entire county.

Atlantic County has a humid and temperature climate, whereby the coastal areas are substantially influenced by the moderating effects on temperature and precipitation by the Atlantic Ocean. As a result, winters are milder and summers are cooler than for interior locations at the same latitudes. This is evident in a comparison of temperatures between inland sections of the county and areas within a 10-15 mile wide belt along the coast. The moderating effect is caused by land and sea breeze circulation patterns which create a thermal differential when larger scale weather systems are not dominating the wind patterns. Hammonton, for example, located about 30 miles inland from the coast, has an average of 35 days a year above 90º F, and 102 days below 32º F. Atlantic City, however, has only 4 days above 90º F, and 69 days below 32º F in the average year. The influence which the ocean imparts on local climatic conditions decreases rapidly with distance from the shore. The extensive wetlands in the southeastern portion of the Township will affect the adjacent land area in the same way, but to a lesser extent.

Egg Harbor Township has an average rainfall of 44.5 inches per year, with the monthly distribution of that precipitation relatively even throughout the year (Table 10-1). The month of highest precipitation occurs in August with an average of 5.22" of rainfall, and the months of lowest precipitation occur in June and February with respective average of 3.27" and 3.25". The amount of precipitation can vary on an annual basis due to the variability of tropical storm patterns traveling northward (Table 10-2).

The length of the growing season is 192 days. The average date of the last killing frost is May 7, and the first in autumn is October 2. While these facts appear precise, they are again an average drawn from many years of data which vary over a wide range. Farmers and gardeners are often not aware that the probability of frost occurrences after the so-called "last day of killing frost" is still 50 %, since average dates represent median values. Actually, the chances of later frosts are much higher since the tables refer to

standard level observations and not to the plant habitat which may be only several inches above the ground surface. In the absence of circulating breezes, temperatures can vary 5º-10º F or more between the ground surface and the 6 foot height where temperatures are normally recorded. New Jersey data indicates that, even within relatively small areas, differences of about five weeks exist between the dates of first and last frosts in coastal locations versus inland valleys. Under favorable terrain and soil-moisture conditions, the number of frosts near the ground may be a multiple of the 6 foot value, and since the "critical temperatures" indicative of plant tissue damage vary considerably with species, varieties, and phase of development (plant sensitivity generally increasing rapidly with growth), the user of such data will have to study the particular microclimatic conditions of his fields or orchards before he will be able to take maximum advantage of the data.

Table 10-1
Average Monthly Temperature and Precipitation

Month	Temperature (ºF)	Precipitation (inches)
January	36.0	3.62
February	35.7	3.25
March	41.1	4.06
April	49.9	3.46
May	59.5	3.53
June	69.0	3.27
July	74.2	4.04
August	73.7	5.22
September	68.4	3.49
October	58.7	3.42
November	48.3	3.73
December	38.3	3.47

Mean annual temp. - 54.4 Total precip. - 44.56

Source: U.S. Department of Commerce, *Decennial Census of United States Climate, Climatic Summary of the United States, Supplement for 1951 through 1960 New Jersey, No. 86-24*

Table 10-2 Average Rainfall Intensity			
Storm Frequency (years)	Storm Duration (minutes)	Mass Rainfall	Average Rainfall Intensity (inches/hour)
2	15	0.81	1.5
	30	1.00	
	60	1.50	
	120	1.75	
5	15	0.90	1.75
	30	1.40	
	60	1.75	
	120	2.00	
10	15	1.12	2.25
	30	1.70	
	60	2.25	
	120	2.60	
25	15	1.25	2.75
	30	1.90	
	60	2.75	

The average rainfall intensity for frequencies of 50- and 100-year storms is 3.25 and 3.75 inches/hour, respectively.

Source: U.S. Department of Commerce, Weather Bureau records

The vegetative growing season is actually much longer than the "frostless season" since plant growth generally starts when the average temperature rises above 43º F, and dormancy begins in the fall when the average temperature falls below this biological threshold. Individual plant species have their own critical periods based upon individual tolerances to temperature.

B. Soils

The soils found in Egg Harbor Township are the result of interaction upon the parent materials by climate and weathering processes, plant and animal life, and topographic relief over geologic time. Local differences between soils within the Township are primarily associated with different parent materials and variations in topography. All soils of Egg Harbor Township originated from the unconsolidated sand and gravelly sand deposits which make up the Outer Coastal Plain Geologic Province. These materials were initially distributed, stratified, and eroded. The most extensive deposits are associated with the Cohansey Formation which underlies the entire Township, but is covered in some areas by thin, more recent deposits from the more severely eroded Bridgeton Formation. The parent materials of the Cohansey Formation are mainly quartz sands, with localized "lenses" or thin strata of light colored clay or gravel. The remnants

of the Bridgeton Formation contain relatively more gravel and clay, occurring as reddish deposits which cap the more prominent uplands areas of the Township.

Lowland soils generally contain significant upper layers of dark colored, moisture retaining organic material accumulated from decomposed plant and animal life which is generally more abundant in wet or formerly wet areas.

All soils have various physical and chemical properties which define their capability to support different types and intensities of land development. The environmental sensitivity or development potential of an area can be defined by the naturally occurring conditions. Soils information can be used to determine severe flood hazard areas, high water table areas, lands susceptible to erosion and areas capable of supporting unique or prime vegetation. Soil data can be used to rate the limitation of an area for specific uses. For example, buildings on soils with a frequent potential for flooding or extremely high water table may result in flooded basement or structural damage. Soils that are too clayey or too wet are not suitable for septic tank absorption fields.

The development limitations of various soils have been identified by the Cape Atlantic Soil Conservation Service and presented within its survey of soil types for Atlantic County. These limitations are usually rated in terms of degree – "slight," "moderate" or "severe." Explanations of these rating are as follows:

- A "slight" rating means little or no limitation for the specified use. Any limitation which exists is easily corrected using conventional practices of construction and normal equipment.
- A "moderate" rating means the presence of some limitation for the specified use, which can normally be overcome by careful design and management, however, at somewhat greater costs than on soils with a slight limitation.
- A "severe" rating means that the limitations are those which cannot normally be overcome except with costly and/or complex measures.

Figure 10-5 displays the soil types that have been identified within Egg Harbor Township according to the Soil Survey of Atlantic County, New Jersey, issued in April, 1978 (reissued August, 1990).

It is important to note that the broad scale soil survey data and descriptions cannot replace detailed onsite investigations and testing for design and development review purposes. The intended use of the soil information which has been provided with this report is to assist the community in locating natural resources and formulating resource management policies based upon their distribution within the Township, not to assess the suitability of specific sites for development.

Description of Soils

The soil types within Egg Harbor Township are described in the Atlantic County Soil Survey, prepared by the U.S. Department of Agriculture Soil Conservation Service, Cape Atlantic District.

Soils having similar profiles make up a soil series. The soils of one series contain major horizons of similar thickness, arrangement, and other important characteristics. Each series is named for a town or other geographic feature near the place where it was first observed by the soil scientists who surveyed the landscape.

Soils of one series can differ in texture, slope or other characteristic that affects its suitability for various uses. These differences are the basis for dividing a soil series into phases or types. The name of a soil type indicates the variations of features which distinguish it from the other soils of the series. For example, HcA – Hammonton Loamy Sand Clayey Substratum, 0 to 2 percent slopes, is one of several phases in the Hammonton series. The Hammonton series also contains HaA, HmA, and HnA phases within Egg Harbor Township. The soils map indicates the dominantly recognized soil phases or types. However, due to sampling and interpretation accuracy, and the scale at which the county-wide survey was prepared, the indicated soil type is only likely to be present in 80 percent of its mapped areas. In areas of the soil survey map where soil materials are so variable that they cannot be classified by a soil series, a descriptive name or land type is used, such as tidal marsh, muck, fill land, and gravel pit.

Following is a list of the soil series found within Egg Harbor Township with a brief description and characteristics of each.

Atsion Series – Soils are located on broad flat depressional areas and narrow drainageways, occupying low positions on the landscape. Atsion soils have naturally low fertility, are well drained, and contain some organic matter. These soils usually possess a rapid permeability and when well drained, have a low available water capacity. In some areas, Atsion soils have a clayey substratum, usually below 40 inches from the surface.

The seasonal high water table is the major limitation for use of this soil for building purposes, but it is well suited for ground water ponds. When this soil is located near streams, it receives runoff from higher elevations and therefore is frequently flooded.

Natural vegetation most common to Atsion soils are pitch pine, blackgum, swamp maple, grey birch, Atlantic white cedar and a dense understory of highbush blueberry, sheep laurel, sweet pepperbush, gallberry, and greenbrier. The soils are naturally very acidic. This series includes the following soil type within Egg Harbor Township:

Ac – Atsion Sand

Aura Series – These soils are located on the highest hilltops and ridges on the landscape. They are usually well-drained, loamy soils with a firm gravelly sandy clay loam in the lower part of the subsoil. These soils are usually located above thick bedded sand or gravel deposits.

Natural vegetation occurring on these soils consists of black, scarlet, and chestnut oaks, scattered pines, and a low-growing understory of laurel, sassafras, low bush blueberry, winterberry, and scattered bayberry. If forest fires have been severe and/or frequent, scrub oak, blackjack oak, and pitch pine dominate.

Natural fertility, content of organic matter, and available water capacity is moderate. Permeability is moderately slow. This series includes the following soil types:

AmB – Aura Loamy Sand, 0 to 5 percent slopes
ArA – Aura Sandy Loam, 0 to 2 percent slopes
ArB – Aura Sandy Loam, 2 to 5 percent slopes

Berryland Series – These soils are found in low positions of the landscape, in areas of wide depressions and broad flat lowlands. They are naturally low in fertility, very acidic and contain a high amount of organic matter. Permeability is moderately rapid, and when drained, they have a low water capacity.

Wetness from a high water table is the major limitation of these soils for building, but they are well suited for groundwater ponds. Since these soils are located near streams, they will receive runoff from higher elevations and are subject to flooding.

Vegetation native to berryland soils includes pitch pine, scattered Atlantic white cedar, blackgum, red maple, grey birch, and sweetgum. The understory is dense, containing holly, sweet pepperbush, highbush blueberry and gallberry. This series includes the following soil types:

Bp – Berryland Sand
Bs – Berryland Sand, flooded

Coastal Beach – This soil type is located on the inner-coastal marshes between Somers Point and the southwest corner of Longport. The soil is characterized by a thick sand deposit which is nearly level to gently sloping, but which can also be found in adjacent dunes. This sand is usually found below elevation 10 feet but above mean low water, therefore making it very susceptible to storm or tidal flooding.

The vegetation found on this soil are those salt tolerant species which are indigenous to both the marsh and beach of the New Jersey coast.

Without substantial filling, most areas of Coastal Beach soils have severe limitations for permanent structures, including homes, roads, utility lines and onsite septic systems because of tidal flooding. The Coastal Beach soil type is indicated by the following designation:

Cu – Coastal Beach - Urban land complex

Downer Series – These soils are located on level to gently sloping areas within the Township's upland sections. They are usually well drained, with either sand or loamy textures, and a medium natural fertility. Downer soils contain low amounts of organic matter, are highly acidic with moderate to moderately rapid permeability, and a moderate available water capacity. The water table within such soils can rise to within 5 feet of the surface during seasonally wet times of the year.

The most common vegetation species found on Downer soils are white, black, red and chestnut oak, and scattered pitch, shortleaf, and Virginia pine. The understory contains sassafras, holly, low bush blueberry, mountain and sheep laurel.

The Downer Series contains the following soil type:

DoA – Downer Loamy Sand, 0 to 5 percent slopes

Evesboro Series – These soils are also found in higher positions on the landscape which is nearly level or gently sloping. Evesboro soils are excessively drained, usually sandy, naturally low in fertility, and have a low content or organic matter. They are very strongly acidic, with a low available water capacity. Permeability of Evesboro soils is rapid near the surface but becomes moderately rapid to slow in their substratum due to high contents of clay. The seasonal high water table is at a depth of 5 feet or greater.

The natural vegetation found on these soils includes black, white and chestnut oak and Virginia, shortleaf, and pitch pine. Frequent forest fires will favor growth of pitch pine, scrub oak, and blackjack oak. The understory species include sheep laurel, lowbush blueberry, scattered bayberry and inkberry. The soil type from this series found within Egg Harbor Township is:

EvB – Evesboro sand, 0 to 5 percent slopes

Fill Land – FL - This land area occurs when excavation of existing soils has taken place and fill has been placed up to several feet in depth, consisting mostly of quartz sand and gravel.

Fill land is usually low in natural fertility; it has a low available water capacity; and permeability is usually rapid. Water capacity and permeability can vary if material used is fine textured.

Depth to ground water is variable, determined by the depth to which the original soil was extracted, the amount and type of fill material used, and the pre-existing water table level.

The limitations for urban uses depend again on the original soil type and thickness of the fill material. The following soil type from this series is found within Egg Harbor Township:

> Fill Land over Tidal Marsh – FM - This fill material contains sand and gravel deposited from dredging operations or by other sources.
>
> The soil is excessively drained, and is naturally low in fertility and organic matter; the available water capacity is low, and permeability is rapid where the amount of fill is more than 6 feet. Where there is less than 6 feet of fill, the drainage and permeability are slower.
>
> Limitations for urban uses are severe due to flooding during coastal storms. When filled, the underlying vegetation will decay, emitting methane and hydrogen sulfide gas, producing undesirable odors for residents.
>
> To properly evaluate fill material, onsite evaluation of percolation rates and compaction capacity is necessary to determine suitability for urban use.

Fort Mott Series – This soil type is found on level to gently sloping high positions in the landscape. It is well drained with a thick, sandy surface layer and a finer textured subsoil. The soil is highly acidic and permeability is moderate to moderately rapid. Fort Mott soils are naturally low in fertility and organic matter content. Available water capacity is low near the surface and moderate in the subsoil.

The most common vegetation found on such soils are red, white, black and chestnut oak, and scattered pitch, shortleaf and Virginia pine. The understory has sassafras, holly, lowbush blueberry, mountain and sheep laurel. Limitations for urban uses are slight, except for dust and erosion hazards. The following soil type from this series is found in Egg Harbor Township:

> FrA – Fort Mott sand, 0 to 5 percent slopes

Hammonton Series – Hammonton soils are located on nearly level, broad flat or depressional areas in intermediate positions on the landscape. They may receive

runoff from higher positions. These soils usually have a fair natural fertility and low or moderate content of organic matter. Acidity varies from extreme near the surface to very strong in lower horizons. The soils have a moderate available water capacity and permeability, except for soils with a clayey substratum.

The seasonal high water table is 1.5 to 4 feet below the surface, which may indicate serious constraints for urban development unless sanitary sewer service is available.

The most common vegetation found in these soils are white, red and black oak, pitch pine, and an understory of holly, mountain and sheep laurel, gallberry, high and low bush blueberry, huckleberry, inkberry and greenbrier. The following soil types from this series are found in Egg Harbor Township:

HaA – Hammonton Loamy Sand, 0 to 3 percent slopes
HcA – Hammonton Loamy Sand, Clayey substratum, 0 to 2 percent slopes
HmA – Hammonton Sandy Loam, 0 to 2 percent slopes
HnA – Hammonton Sandy Loam, Clayey substratum, 0 to 2 percent slopes

Klej Series – Klej soils are located on intermediate positions in the landscape, are moderately to poorly drained, very acidic, sandy, and low in both natural fertility and organic matter. Permeability is rapid above the clay layers and slow within it. Available water capacity is moderate, but becomes low when drained.

Klej soils have a 1.5 to 4 foot depth to seasonal high water table and, therefore, possess severe limitations for septic disposal systems and houses with basements. Some of these soils are located near streams and receive runoff from higher elevations which makes them flood prone.

The common vegetation of Klej soils are black, scarlet, red, and white oak; black, sweet and sour gum; Virginia and pitch pine; and understory species including low bush blueberry, sheep laurel, sassafras, gallberry, holly and huckleberry. The following soil types of the Klej Series are found in Egg Harbor Township:

KmA - Klej Loamy Sand, 0 to 3 percent slopes
KnA - Klej Loamy Sand, clayey substratum, 0 to 3 percent slopes

Lakehurst Series – Soils are located on nearly level slopes and occupy intermediate positions on the landscape. The soil is very acidic, very low in natural fertility, and low in organic content. Lakehurst soils are well drained to poorly drained according to their position on the landscape, the majority being moderately well drained. Permeability is rapid because Lakehurst soils are sandy or loamy sand. Available water capacity is low. Seasonal high ground water is 1.5 to 4 feet below the surface, and they are, therefore, unsuitable for conventional septic disposal systems.

Vegetation species common to Lakehurst soils are pitch pine, white black, red and blackjack oak, and the gum tree varieties. The understory contains low and high bush blueberry, sheep and mountain laurel, and scattered gallberry. The following soil type from the Lakehurst Series is found in Egg Harbor Township:

LaA – Lakehurst Sand, 0 to 3 percent slopes

Lakewood Series – Soils are on nearly level to sloping, high positions on the landscape. Lakewood soils are highly acidic, excessively drained sand with quartz sediments. Natural fertility is low and there is little organic content. Permeability is rapid, available water capacity is low, and the seasonal high ground water is greater than 5 feet below the surface. These soil conditions can cause ground water pollution from septic systems due to rapid permeability.

Indigenous vegetation to these soils are large stands of pitch pine, chestnut, black and white oak. The understory contains low bush blueberry, gallberry, sheep laurel, scattered bayberry and leather leaf. The soil type of the Lakewood Series found in Egg Harbor Township is:

LeB – Lakewood Sand, 0 to 5 percent slopes

Matawan Series – Soils are located on level to slightly depressional, intermediate positions on the landscape. Matawan soils are extremely acidic, sandy-loam to sandy-clay loam, moderately fertile, and a have a medium organic content. Drainage permeability and available water capacity of these soils are moderate. Seasonal high water table in the Matawan series ranges between 1.5 to 3 feet below the surface. Limitations for septic systems are severe for these soils and if cleared, there is a high possibility of erosion. Vegetation common to this soil type includes scarlet, white, and black oak; and scattered pitch pine. The understory has sassafras, holly, mountain and sheep laurel, and huckleberry. The soil type of the Matawan series found in Egg Harbor Township is:

MtA – Matawan Sandy Loam, 0 to 5 percent slopes

Mu - Muck – This soil material is found on nearly level areas located on low positions of the landscape either under or adjacent to streams. Muck is composed of decomposed organic matter 16 inches to 4 feet or more thick with an underlying base of fine to coarse sand and gravel.

Muck soil is extremely acidic, with a medium natural fertility and a high content or organic matter. The permeability of muck is rapid, and available water capacity is high. The ground water is at or near the surface most of the year, except when extended dry periods occur. Muck is frequently flooded and not suited for development.

Vegetation common to muck soils includes Atlantic white cedar and swamp red maple. The understory species include dense stands of sweet pepper bush, swamp azalea, high bush blueberry, greenbrier and sweet bay magnolia.

Pocomoke Series – Soils are found on nearly level, broad swampy depressions and narrow drainageways located in very low positions on the landscape. This soil is extremely acidic, sandy loam to sand type, poorly drained, high in organic content with medium fertility. Permeability of the Pocomoke series is moderate if drained, and the available water capacity is medium. Seasonal high water table is located near or at the surface and only drops a few feet in the summer. This soil frequently receives runoff from higher elevations and is subject to occasional flooding if located near a stream. The common vegetation supported by Pocomoke soils are black gum, sweetgum, red maple, sweet bay magnolia, white, red, pin, and willow oak, holly and scattered pitch pine. The understory common on these soils includes dense thickets of high bush blueberry, huckleberry, swamp azalea, leather leaf, gallberry, and greenbrier. The soil of the Pocomoke Series found in Egg Harbor Township is:

Po – Pocomoke Sandy Loam

Sassafras Series – Soils are found on nearly level to gently sloping areas located on the higher positions of the landscape. These soils are extremely acidic and are well drained, consisting of sandy loams, sandy clay loams, or loamy sands, with clay and gravel deposits intermixed. The natural fertility and organic content of these soils is moderate. The available water capacity of Sassafras soils is high and their permeability is medium. Depth to season high water table is usually 5 feet or greater.

Vegetative species native to such soils are the black, white, red, scarlet, and chestnut oak, and pitch and short leaf pine. The understory species include sheep and mountain laurel, sassafras, lowbush blueberry, leatherleaf, huckleberry and gallberry. The following soil types of the Sassafras Series are found in Egg Harbor Township:

SaA – Sassafras Sandy Loam, 0 to 2 percent slopes
SaB – Sassafras Sandy Loam, 2 to 5 percent slopes

Tidal Marsh – Tidal Marshes in Egg Harbor Township occur along the lower sections of the streams and rivers where tidal fluctuations in water levels occur daily, and in the Bay Area behind Absecon Island. Tidal Marsh soils have a mineral surface layer over organic and silty clay materials with complex sequences of mineral and muck sub-strata. An underlying layer of sand, found well below the surface, is firm and compact.

Tidal Marsh soil is slightly acidic to alkaline; the organic material is extremely acidic to neutral. A greater amount of wetness causes these soils to become more

neutralized. If drained sufficiently, the acidity of these soils will increase sufficiently to prohibit vegetation growth. Available water capacity of tidal marsh soils is high, approximately 300,000 gallons per acre per one foot of storm tide. The suitability for development is only possible by filling, but is still severe because of storm flooding. The following types of Tidal Marsh soils are found in Egg Harbor Township:

TD – Tidal Marsh, deep
TM – Tidal Marsh, moderately deep
TS – Tidal Marsh, shallow

Woodstown Series – These soils occupy nearly level positions in intermediate elevations on the landscape. These soils are extremely acidic at the surface, loamy and moderately well drained. The natural fertility and organic content is medium. Woodstown soils receive some runoff from higher elevations. Permeability and available water capacity are moderate. Seasonal high water ranges between 1.5 to 4 feet below the surface, but is below 5 feet in the summer. They are normally unsuitable for septic disposal systems.

Vegetation commonly found on Woodstown soils consists of white, red and black oak; pitch pine; and an understory of holly, mountain and sheep laurel, lowbush blueberry, gallberry, leather leaf and greenbrier. The following soil type of the Woodstown Series is found in Egg Harbor Township:

WCA – Woodstown Sandy Loam, 0 to 2 percent slopes

C. Hydrology

The Hydrologic Cycle

The endless circulation of water and water vapor over the globe is known as the hydrologic or water cycle. This circulation is dispersed into three sections of the earth's system: the atmosphere, the hydrosphere (the water covering the surface of the earth), and the lithosphere (the soil and bedrock beneath the hydrosphere). The energy needed to circulate this endless cycle is provided by the sun and gravity. Moisture is evaporated primarily from water surfaces, with nominal amounts from the land surface and vegetation. The evaporated water is carried in the atmosphere, usually drifting tens to hundreds of miles before being returned to the earth as precipitation, in the form of either rain, snow, hail or sleet. This precipitated water may be intercepted by vegetation; run over the ground surface as overland flow and eventually into stream channels; or infiltrate into the ground. A considerable portion of the intercepted water and the surface runoff returns to the air by evaporation. The infiltrated water may seep down to deeper zones of the earth forming groundwater storage which may later flow out to streams as base flow. These streams will eventually empty into the ocean, where water will evaporate into the atmosphere to complete the hydrologic cycle.

Surface Water Resources

Figures 10-1 and 10-2 indicate the watersheds and water bodies of the Township. The western, or mainland portion of the Township lies within the three major watersheds of the Lower Great Egg Harbor River, Patcong Creek, and Absecon Creek. The eastern portion of the Township lies within the general direct drainage area of the back bay region between Great Egg Harbor Bay and Lakes Bay.

Of the three major watersheds of the mainland portion of the Township, only Patcong Creek originates wholly within Egg Harbor Township. As Figure 10-2 indicates, however, the origin or headwater areas of many secondary watersheds are located entirely within Township boundaries. Due to those particular circumstances, the Township is in a unique position to protect these critical headwater areas and associated environs through the adoption of guidelines and regulations which are sensitive to the potential environmental impacts of development activities.

Headwater areas of streams are regarded as a particularly sensitive environmental resource. During periods of low stream flow, which normally recur on an annual basis in this region, dilution rates fall and normally safe levels of pollutants may exceed threshold concentrations for certain species in the river's ecosystem. If even one plant or animal species is eliminated, or its population greatly reduced, the balance of the food chain may never return to its original state of equilibrium.

Typically, the value of these resources is measured in terms of the unique recreational and scenic opportunities afforded. An evaluation of the land uses in the community revealed little public access to the vast open water areas available to Township residents. Accordingly, it is recommended that an increased emphasis be directed at policies which encourage public access to the Township's vast network of streams, lakes and estuarine areas. Concurrent with the study regarding inclusion of the Great Egg Harbor River system into the Wild and Scenic Rivers inventory, the Township should coordinate any efforts for expanded recreational opportunities in this area with the appropriate governmental agency. Since many of the existing settlements owe their origins to a linkage with water-borne commerce, recognition and identification of these areas may provide an opportunity to realize their historical significance and revitalize an important cultural resource.

In recent years, the deteriorating quality of our nation's waters has become a source of major concern. In response, new Federal policies were established to improve water quality nationwide, with a stated goal of "swimable and fishable" waters by the early 1980's. A realization of the importance of water quality to the maintenance of the unique Pinelands ecosystems has focused a great deal of attention on the subject from the Pinelands Commission as well. The focus of most of the effort, however, has been toward the common goal of identifying the complex relationships which exist between human activity, particularly land development and uses of different types, and the resultant impacts upon water quality.

Public Law 92-500 was enacted in 1978 to provide a comprehensive program of measures aimed at restoring and maintaining the "chemical, physical, and biological

integrity" of surface water resources in the United States. In reality, implementation of this program involved the efforts of the U.S. Environmental Protection Agency (EPA), N.J. Department of Environmental Protection (NJDEP), and most recently, the New Jersey Pinelands Commission.

Characteristic streams of the region are closely spaced, relatively parallel, and are typically slow moving and shallow because of the low topographic gradient of the area. Surface waters are brownish, or tea colored as a result of the natural abundance of an organic iron complex derived from the oxidation of iron ions dissolved in groundwater. Most streamflow actually originates from groundwater emerging in low-lying areas such as swamps, bogs, or stream channels. The high iron content of this water mixes with decomposing vegetation at the surface to produce the characteristic color. Waters are characteristically low in hardness, alkalinity, and pH value, and most are high in humic complex, especially during the growing season.

Relatively little data is available on local water quality because monitoring programs are most frequently conducted in areas where serious problems are detected or probable due to high levels of development. That data which is available for the Township waters is presented below.

Table 10-3
HYDROLOGIC BUDGET ANALYSIS DATA

Basin	Precipitation (inches)	Evapotranspiration (inches)	Calculated Runoff (inches)
Absecon Creek	43.0	20.7	22.3
Patcong Creek	41.3	20.8	20.5
Great Egg Harbor Basin	44.4	22.0	22.4
Lower Great Egg Harbor	44.7	21.4	23.3

Source: N.J. Pinelands Comprehensive Management Plan

Table 10-4 WATER QUALITY STATION DATA								
		Point Source			**Nonpoint Source**		**Land Use**	
Water Quality Station	Drainage Area (sq. mi.)	Qty. of Sewage Plant Discharge (1,000 gal/day/sq. mi.)	# of Sewage Treatment Plants	# of Industrial Dischargers	# of Landfills	# of Effluent Spray Irrigation Sites	% Developed	% Agricultural
Lower Great Egg Harbor River (Below Mays Landing)	-	-	7	3	9	2	-	-
Total Great Egg Harbor River Basin	304	-	7	3	9	2	6	17
Total Absecon Creek Basin	19	0	0	0	2	0	61	2
Total Patcong Creek Basin	26	-	1	0	0	0	43	3

Source: N.J. Pinelands Comprehensive Management Plan

Groundwater Resources

Egg Harbor Township, by virtue of its location within the outer portion of the Atlantic Coastal Plain, possesses abundant water resources, both on the surface and underground. The region's rainfall, abundant and evenly distributed throughout the year, falls on porous, sandy soils which effectively filter and store vast quantities of high quality fresh water.

The solid bedrock foundation beneath Egg Harbor Township lies at a depth of about 3,000 feet below the surface, sloping gradually downward toward the east. Overlying these sedimentary rocks are numerous layers of sand, gravels and clays. These unconsolidated, water bearing formations are known as aquifers which can range in thickness from a few feet to hundreds of feet. They may underlie several acres or many square miles and can be classified as follows:

- Unconfined aquifer has an upper surface of permeable material which does not confine the water therein under pressure. An unconfined aquifer has a surface called a water table which represents the depth from the surface to the area or zone of saturation within the formation.

- Confined aquifer occurs when groundwater is confined between impermeable layers of rock or clay. A confined aquifer is also known as an artesian or pressure aquifer.

Aquifer outcrop areas are those areas where the geologic formation comprising the aquifer is exposed at the surface. It is the rainwater falling over outcrop areas and percolating through the soil which recharges the groundwater reservoir. In general, the greater the area of outcrop, the greater the quantity of water an aquifer can yield.

Unquestionably, the most important aquifer to Egg Harbor Township and the rest of Southern New Jersey is the Cohansey Sand Formation. This formation is distinguished by extensive outcrops throughout the Township, except where overlain by the thin, discontinuous Bridgeton and Cape May Formation deposits. The latter were derived from erosion and redistribution of Cohansey Sand and Beacon Hill Gravel. Remnants of the Bridgeton Formation cap the higher hills and upper slopes of pronounced ridges. Because there is no confining layer beneath these isolated deposits, they are considered to be hydraulically linked to the Cohansey Sand. The Cohansey Sand Formation typically consists of unconsolidated, fine to coarse grained quartzose sand with gravel lenses usually less than 1 foot thick. Individual sand grains are angular to well rounded and have an iron oxide surface stain which gives an orange or reddish color. Some sand beds are, however, light gray to white. The total thickness of the Cohansey Sand aquifer in Atlantic County ranges from about 70 feet to 211 feet. The thickness varies throughout, but in general the Cohansey thickens to the southeast and is potentially the most productive aquifer in the New Jersey Coastal Plain. Since it is composed predominantly of highly permeable and generally well sorted sands and gravels, it is thus able to store and transmit large quantities of water. It outcrops, either at the surface or beneath the veneer of permeable Bridgeton deposits, over an area of 2,350 square miles, which is more than the outcrop area of all other aquifers in the New Jersey Coastal Plain. Because of its size, the aquifer is exposed to and able to absorb vast quantities of recharge from precipitation. A considerable part of its total volume, 30 percent or more, is void space capable of holding water and yielding a substantial portion of that store for human use.

The water table in the Cohansey Formation is typically shallow, generally less than 10 feet below the surface. Its cyclical fluctuations in response to discharge and recharge rarely exceed 7 feet. The underground reservoir of fresh groundwater is derived entirely from precipitation over the outcrop area. Losses to evapotranspiration have been estimated at 50%, and to overland flow at 11%, leaving 39% for recharge. Therefore, about 20 inches of rainfall reach groundwater each year, or 950,000 gallons per day per square mile. Excess groundwater discharges through swamps and bogs to support 89 percent of the stream flow in the Pinelands. Typically, average annual stream discharges (volume per unit area) are low. Flow rates throughout the year tend to be relatively uniform, and peak discharges from storms are low. Rainfall is absorbed by the porous soil, held in storage in the large groundwater reservoir, and gradually released throughout the year.

Based on the experiences of other areas with similar hydrogeologic characteristics in Long Island and Delaware, it can be inferred that the Cohansey aquifer is highly susceptible to pollution. Significant pollution sources, actual or potential, include septic tanks, landfills, chemical spills and dumping, chemical storage leaks, industrial waste lagoons, highway de-icing, and agricultural chemicals. These sources may have

immediate local impacts, and also pose a long-term, cumulative threat. For these reasons, land management regulations and reviews of proposed development on a case by case basis are necessary to insure the protection of this vast, yet essential natural resource. The Cohansey Sand Formation is the source of virtually all individual wells for potable water within Egg Harbor Township.

The quality of water in the Cohansey Sand is largely determined by local conditions at the land surface. Since the aquifer is recharged by the direct percolation of precipitation, soluble material in the soil or on the land surface is readily leached into the aquifer and may contribute to the degradation of water quality. Thus, the most productive aquifer of the region is also the one that is most exposed to damage from human activity and in need of careful management. Generally, the waters from the Cohansey are slightly mineralized and soft with only localized concentrations of iron presenting occasional problems for human use.

All areas of Egg Harbor Township are classified within the groundwater classification area GW-2, which is defined as those areas where the natural background concentration of Total Dissolved Solids (TDS) is less than or equal to 500 mg/1. This classification reflects the naturally high quality of groundwater in the Township. Since all water for consumption is drawn from the groundwater aquifer, it is appropriate that high standards be established for the protection of this valuable resource. Those standards and designated uses established by the NJDEP are as follows. The maximum limits for a specific criterion shall be exceeded only as a result of natural conditions.

Groundwater Class GW-2 – Designated Uses

Class GW-2 groundwater having a natural total dissolved solids (TDS) concentration of 500 mg/l or less shall be suitable for potable, industrial, or agricultural water supply, after conventional water treatment for hardness, pH, Fe, Mn and chlorination where necessary, or for the continual replenishment of surface waters to maintain the quantity and quality of the surface waters of the State, and other reasonable uses.

Table 10-5
GROUNDWATER QUALITY CRITERIA - CLASS GW-2

PRIMARY STANDARDS/TOXIC POLLUTANTS

Pollutant, Substance or Chemical	Groundwater Quality Criteria
Aldrin/Dieldrin	0.003 µg/1
Arsenic and Compounds	0.05 mg/l
Barium	1.0 mg/l
Benzidine	0.0001 mg/l
Cadmium and Compounds	0.01 mg/l
Chromium (Hexavalent) & Compounds	0.05 mg/l
Cyanide	0.2 mg/l
DDT-and Metabolites	0.001 µg/l
Endrin	0.004 µg/l
Lead and Compounds	0.05 mg/l
Mercury and Compounds	0.002 mg/l
Nitrate-Nitrogen	10 m g/l
Phenol	3.5 mg/l
Polychlorinated Biphenyls	0.001 µg/l
Radionuclides	Prevailing regulations adopted by the USEPA pursuant to Sections 1412, 1415, and 1450 the Public Health Services Act as amended by the Safe Drinking Water Act (PL 93-523)
Selenium and Compounds	0.01 mg/l
Silver and Compounds	0.05 mg/l
Toxaphene	0.005 µg/1

SECONDARY STANDARDS	
Pollutant, Substance or Chemical	Groundwater Quality Criteria
Ammonia	0.5 mg/l
Chloride	250 mg/l
Coliform Bacteria	a) by membrane filtration, not to exceed four per 100 ml in more than one sample when less than 20 are examined per month, or b) by fermentation tube, with a standard 10 ml portion, not to be present in three or more portions in more than one sample when less than 20 are examined per month, or c) prevailing criteria adopted pursuant to the Federal Safe Drinking Water Act (PL 93-523)
Color	None Noticeable
Copper	1.0 mg/l
Fluoride	2.0 mg/l
Foaming Agents	0.5 mg/l
Iron	0.3 mg/l
Manganese	0.05 mg/l
Odor and Taste	None Noticeable
Oil and Grease and Petroleum Hydrocarbons	None Noticeable
pH (Standard Units)	5-9
Phenol	0.3 mg/l
Sodium	50 mg/l
Sulfate	250 mg/l
Total Dissolved Solids (TDS)	500 mg/l
Zinc and Compounds	5 mg/l
BOD (5-day)	3 mg/l
Phosphate, Total	0.7 mg/l

D. Vegetation

Perhaps more than any other single natural feature, the unique patterns of vegetation in Egg Harbor Township define the region's distinctive, essential character. While vegetation refers generally to an area's plant cover, the distribution of specific vegetation types in a localized area is governed by a combination of factors which make up the local habitat. Climate, soil, animals, man, fire, time, and other plants are just some of the factors which interact to produce the environment, or habitat in which a plant grows. Climate is a measure of temperature, rainfall, snowfall, wind and other types of weather factors. Animals may affect plants by grazing or transporting their seeds. Soils affect plants by their ability to support roots and hold water and nutrients. Fire may eliminate

species of plants unable to reproduce by resprouting, and may cause an increase in those that can resprout.

Vegetation, whether a forest or an old field, changes like an individual organism in appearance and structure over time. Forests age very slowly, requiring hundreds, even thousands of years to reach a stable state of species size and composition, known as a climax state. For this reason, changes due to aging of a forest are frequently hard for humans to recognize. As time goes on, some forest species become less suited to the slowly changing conditions for survival while others become better suited. The result is a decrease in the numbers of some species while the proportions of other competing species increase. Such changes in the composition of species through time is known as succession.

The single factor which is most important for differentiation of plant habitats within Egg Harbor Township is the amount of moisture within the soil substrate, that medium in which the plants are rooted. Different plant species differ in their requirements for water as well as their ability to tolerate extremes of excessive water or drought. Certain plants can live only in standing water while others are adapted to much drier conditions, and still others are best suited to various gradations of saturation between the two extremes. Since rainfall distribution is virtually the same throughout the Township, the amount of water available to plants through the soil is controlled primarily by the relief of the land surface and the depth to groundwater. Groundwater levels are frequently at or above the surface in lowlying or depressional areas. In upland areas, rainfall normally percolates rapidly through the sandy soils to groundwater level which may never be higher than 5' - 10' or more below the surface. In tidal areas in the vicinity of Green Bank, the river normally floods the land twice daily to depths ranging from a few inches to several feet during storms. The water is brackish, having a varying salt content due to variable mixing of the fresh water flowing downstream with the saline water of the estuary.

In addition to soil moisture, acidity of soils appears to be another major factor influencing the successful development of certain plants on particular sites. In some lowlands, because of poor drainage (where there is little or no movement of water) dead plant and other organic materials do not fully decompose but form soil material called peat. Accumulations of peat are accompanied by very acidic conditions and low fertility to which some plant species are intolerant, and others are well adapted. These strongly acidic conditions are most prevalent in the tidal marsh areas, but also occur in the numerous swamps and bogs throughout the Township where drainage is sluggish.

The two broad categories of vegetation complexes which can most readily be distinguished are uplands and lowlands. Lowland types exist in areas where the groundwater is near or above the surface during some part of the year. Upland forest and vegetation complexes, therefore, occupy the remaining area.

The Vegetation Map (Figure 10-6) indicates those natural vegetation complexes which exist on undisturbed lands within Egg Harbor Township and on areas cleared for active agriculture or some form of development. Although somewhat generalized, the map can

serve as a good indicator of vegetation conditions on any site within the Township. An examination of the Vegetation Map in conjunction with the other maps of the series indicates the relationship of vegetation types to those other environmental features which were mapped. Topography, soil types, wetness or depth to groundwater, and location within watersheds are all factors which help determine the naturally occurring vegetation complex which may be found on undisturbed sites. Since the transition from one vegetative type to another is generally gradual due to gentle slopes and correspondingly gradual changes in moisture or soil types, care should be taken when a site lies near a boundary between vegetation types. The map should never take the place of onsite investigation by qualified individuals because changes in land use may have occurred since the mapping data was obtained, or details too small for mapping may have significance for certain types of proposed development and should be assessed on an individual basis.

Upland Complex

Upland habitats are characterized by two major vegetation associations: the pine-oak forest and the oak-pine forest, distinguished from each other primarily by the species of dominance. If left undisturbed, natural succession will favor the establishment of strongly oak-dominated forest. This occurs where fire and other disturbances are minimal, since pine seedlings will readily establish themselves in cleared or burned over areas where there is little accumulation of plant litter. Oak seedlings will not appear until a substantial amount of litter accumulates, but under those conditions, pines will no longer grow from seed. For this reason, pines will dominate the upland forest initially, but given a long enough period of time, oaks will naturally tend to replace them. The opportunistic pines will mature and die off without being able to set seed, while at the same time oak seedlings continue to establish themselves and eventually dominate under favorable conditions.

Wildfires have been an integral factor in shaping the distribution of Pine Barrens vegetation throughout history. Typically dry soils and occasional droughty conditions coupled with high winds and favorable fuel conditions are especially prevalent in spring and early summer, and favor the periodic recurrence of wildfires. The hazards of wildfire in terms of each vegetation type are presented in more detail at the end of this Chapter.

As the Vegetation Map indicates, most forested uplands in Egg Harbor Township are inhabited by oak-pine forest rather than pine dominated pine-oak forest. This can be explained in terms of the upland forest succession process described above. Forested areas of the Township are distinctly divided by natural and man-made firebreaks such as roads, agricultural fields, and other forms of development as well as numerous wetland corridors. These conditions tend to limit the spread of wildfires or provide access for firefighting equipment. As a result, the natural succession toward oak dominated uplands is aided.

The following table lists those tree species common to the oak-pine and pine-oak forest types. They may occur in different distributions in different areas due to the sites' history

of disturbance or fire, with some influence by soil types and adjacent land uses or vegetation. Except for the pitch pine (Pinus rigida) which is common to both upland and certain wet lowland sites, most species will be distinct from the inhabitants of the various lowland forest types.

Table 10-6
UPLAND FOREST SPECIES

Common Name	Scientific Name
Trees	
pitch pine	Pinus rigida
shortleaf pine	Pinus echinata
Virginia pine	Pinus virginiana
red cedar	Juniperus virginiana
black oak	Quercus velutina
white oak	Quercus alba
chestnut oak	Quercus prinus
blackjack oak	Quercus marilandica
post oak	Quercus stellata
scarlet oak	Quercus coccinea
southern red oak	Quercus falcata
Shrubs	
lowbush blueberry	Vaccinium vacillans
black huckleberry	Gaylussacia bacata
scrub oak (bear oak)	Quercus ilicifolia
mountain laurel	Kalmia latifolia
Grasses and Herbs	
firesedge	Cyperaceae fam.
orange broomsedge	Andropogon virginicus
switchgrass	Panicum virgatum
bracken fern	Pteridium aquilinum
wintergreen	Chimaphilia maculata

Source: McCormick, Jack, *Pine Barrens: Ecosystem and Landscape.* Forman, R.T., ed., 1979.

Lowland Complex

Distinguished from the upland complex forest types mainly by soil wetness which favors dominance by water tolerant species, the lowland forest complexes consist of species

which are grouped into several distinct associations based upon local conditions and the site's history.

Lowland forest types which occur within Egg Harbor Township include Atlantic white cedar swamps, hardwood swamps, pitch pine lowlands, bogs, and inland marshes. Each contains species associations which distinguish it from the others, although there is certainly some overlapping of individuals between the types, especially in transitional zones. Those dominant species which distinguish each lowland forest type are identified in Tables 10-7 through 10-11.

Lowlands have been identified as a relatively scarce and fragile resource. They comprise the habitat not only for many animal species designated as threatened or endangered by the N.J. Department of Environmental Protection and the U.S. Department of the Interior, but for many other species as well. More rare plant species occur in lowland than in upland habitats. Finally, lowland habitats influence the quality, quantity, and distribution of surface and groundwater in the ecosystem. They tend to retain water during dry periods while during wet periods they slow runoff and minimize the effects of erosion by trapping silt and sediment from upland areas.

The lowland complex which occupies the "highest of the lowland" sites is known as pitch pine lowland forest. Most stands of this forest type occur as narrow bands in those transitional areas between upland areas and hardwood swamp or cedar swamp forests. As water levels in stream corridors fluctuate, there may be standing water above the ground surface or it may be saturated for a period, while in drier periods it may appear completely dry. A distinguishing characteristic of the pitch pine lowland forest is the dense, high understory shrub growth (5' or higher) frequently with impenetrable walls of greenbrier vines.

Table 10-7 LOWLAND FOREST SPECIES PITCH PINE LOWLAND FOREST	
Common Name	Scientific Name
Trees	
pitch pine	Pinus rigida
red maple	Acer rubrum
blackgum (sour gum)	Nyssa sylvatica
gray birch	Betula populifolia
sassafras	Sassafras albidum
sweet gum	Liquidambar styraciflua
Shrubs	
sheep laurel	Kalmia angustifolia
dangleberry	Gaylussacia frondosa
black huckleberry	Gaylussacia baccata
grouseberry	Gaylussacia dumosa
winterberry	Ilex verticillata
staggerbush	Lyonia mariana
highbush blueberry	Vaccinium corymbosum
sweet pepperbush	Clethra alnifolia
swamp azalea	Rhododendron viscosum
maleberry	Lyonia ligustrina
fetterbush	Leucothoe racemosa
catbrier	Smilax glauca
bullbrier	Smilax rotundifolia
scrub oak	Quercus ilicifolia
Herbs	
wintergreen	Chimaphilia maculata
bracken fern	Pteridium aquilinum
cinnamon fern	Osmundia cinamomea
turkeybeard	Xerophyllum asphodeloides
sphagnum moss	Sphagnum spp.
haircap moss	Polytrichum juniperinum
other bryophytes	

Source: McCormick, Jack, *Pine Barrens: Ecosystem and Landscape.* Forman, R.T. ed. 1979.

The other two major forest types of the lowlands are closely intermingled and highly competitive. While cedar swamp forests tend to occupy the very wettest positions, however, hardwood or broadleaf swamp forests will readily replace cedar swamps in areas where cedar is harvested unless management practices are instituted. Although the largest cedar stands are already gone, cedar swamps were once the most extensive swamp

forest type in the Pinelands. The logging of cedar, especially from smaller or mixed stands will favor natural succession to hardwoods because shade-intolerant cedar saplings will not develop unless sufficiently large areas are clear cut to allow cedars to grow in full sun.

Table 10-8 LOWLAND FOREST SPECIES HARDWOOD SWAMP FOREST	
Common Name	Scientific Name
Trees	
trident red maple	Acer rubrum
blackgum (sour gum)	Nyssa sylvatica
sweetbay magnolia	Magnolia virginiana
gray birch	Betula populifolia
sassafras	Sassafras albidum
Shrubs	
highbush blueberry	Vaccinium corymbosum
sweet pepperbush	Clethra alnifolia
swamp azalea	Rhododendron viscosum
leatherleaf	Chamaedaphne calyculata
fetterbush	Leucothoe racemosa
black huckleberry	Gaylussacia baccata
dangleberry	Gaylussacia frondosa
Herbs	
chain fern	Woodwardia spp.
bladderwort	Utricularia spp.
sundew	Drosera spp.
sphagnum moss	Sphagnum spp.

Source: *Vegetation of New Jersey*. Robichaud, B., Buell, M., 1973.
McCormick, Jack, *Pine Barrens: Ecosystem and Landscape.* Forman, R.T., ed., 1979.

Table 10-9 LOWLAND FOREST SPECIES CEDAR SWAMP FOREST	
Common Name	Scientific Name
Trees	
southern white cedar	Chamaecyparis thyoides
trident read maple*	Acer rubrum
blackgum* (sour gum)	Nyssa sylvatica
sweetbay magnolia*	Magnolia virginiana
pitch pine*	Pinus rigida
Shrubs	
highbush blueberry	Vaccinium corymbosum
dangleberry	Gaylussacia frondosa
swamp azalea	Rhododendron viscosum
sweet pepperbush	Clethra alnifolia
fetterbush	Leucothoe racemosa
Herbs	
chain fern	Woodwardia spp.
bladderwort	Utricularia spp.
sundew	Drosera spp.
pitcherplant	Sarracenia purpurea
swamp pink	Helonias bullata
partridgeberry	Mitchella repens
curly grass fern	Schizaea pusilla
sphagnum moss	Sphagnum spp.

*Generally sparse or understory species
Source: McCormick, Jack, *Pine Barrens: Ecosystem and Landscape.* Forman, R.T., ed., 1979.

Table 10-10 LOWLAND SPECIES POND AND BOG-SHRUB WETLAND	
Common Name	Scientific Name
Pond; Water Areas	
white waterlillies	Nymphaea odorata
spatterdock	Nuphar variegatum
bladderworts	Utricularia spp.
Shoreline, shallow water zone	
sphagnum mosses	Sphagnum spp.
sedges	Carex spp.
rushes	Juncus spp.
pipeworts	Eriocaulon spp.
chain ferns	Woodwardia spp.
Seasonally inundated zones	
lowland broomsedge	Andropogon virginicus var. abbrevatus
bullsedge	Carex bullata
Shrubby Wetland	
leatherleaf	Chamaedaphne calyculata
highbush blueberry	Vaccinium corymbosum
peat mosses	Sphagnum spp.
chain ferns	Woodwardia spp.
sheep laurel	Kalmia angustifolia
staggerbush	Lyonia mariana

Source: McCormick, Jack, *Pine Barrens: Ecosystem and Landscape*. Forman, R.T., 1979.

Table 10-11 SALTWATER MARSH SPECIES	
Common Name	Scientific Name
Zone Nearest Water	
salt-marsh cordgrass	Spartina alterniflora
Inner Zones	
salt-meadow grass	Spartina patens
black marsh grass	Juncus gerardi
spike grass	Distichlis spp.
In Saline Depressions	
glasswort	Salicornea spp
sea Blite	Suaeda spp.
marsh fleabane	Pluchea spp.
orache	Atriplex patula
saltwort	Salsola kali
On Higher Ground	
sea lavender	Limonium spp.
salt-marsh aster	Aster tenuifolius
marsh mallow	Hibiscus palustris
seaside goldenrod	Solidago sempervirens
sea myrtle (shrub)	Baccharis halimifolia
marsh elder (shrub)	Iva frutescens

Source: *Vegetation of New Jersey*. Robichaud, B., Buell, M., 1973.

Wetlands

The foregoing sections describing Egg Harbor Township soils and vegetation types provide the information necessary to understand the meaning of wetlands. According to the Pinelands Commission and the New Jersey Coastal Area Facilities Review Act (CAFRA), wetlands are defined as those lands which are inundated or saturated by water at a magnitude, duration and frequency sufficient to support the growth of water tolerant plant species classified as hydrophytes. Wetlands include lands with poorly drained or very poorly drained soils as designated by the National Cooperative Soils Survey of the Soil Conservation Service of the United State Department of Agriculture. Wetlands include coastal wetlands, inland wetlands and submerged lands.

The definition of wetlands is, therefore, twofold, entailing a soils and a vegetation component. As described previously, however, the degree to which soils, topography,

and wetness correspond to the naturally occurring vegetation type dictates that the two components of the definition will occur in the same locations or areas most of the time.

Those soils types that occur in Egg Harbor Township and are defined as wetland soils are the following:

Ac - Atsion Sand
Bp - Berryland Sand
BS - Berryland Sand, flooded
Cu - Coastal Beach - urban land complex
MU - Muck
Po - Pocomoke loam
TD - Tidal Marsh, deep
TM - Tidal Marsh, Moderately deep
TS - Tidal Marsh, shallow

Both soils maps and vegetation maps should be consulted for determining the presence of wetlands. The wetlands species list adopted by the Pinelands Commission (Table 10-12) shall be considered the official list for local planning and regulatory purposes. Those vegetation types which contain hydrophytes as predominant species are the following:

Cedar Swamp Forest
Hardwood Swamp Forest
Pitch Pine Lowlands
Bogs - Shrub Wetlands, aka Inland Marshes
Tidal Marsh

Table 10-12 WETLAND VEGETATION – COASTAL WETLANDS	
Common Name	Scientific Name
Salt meadowgrass	Spartina patens
Spike grass	Distichlis spicata
Black grass	Juncus gerardi
Saltmarsh grass	Spartina alterniflora
Saltworts	Salicornia europaea & bigelovi
Sea lavender	Limonium carolinianum
Saltmarsh bulrushes	Scirpus robustus & atlanticus
Sand spurrey	Spergularia marina
Switch grass	Panicum vigatum
Tall cordgrass	Spartina pectinata
Hightide bush	Iva frutescens var, oraria
Cattails	Typha angustifolia & iatifolia
Spike rush	Eleocharis rostellata
Chairmaker's rush	Scirpus americanus
Bent grass	Argostis palustris
Sweet grass	Hierochloe odorata
Wild rice	Zizania aquatica
Olney's threesquare	Scirpus olneyi
Marsh mallow	Hibiscus palustris
Salt reed grass	Spartina cynosuroides
Common reed grass	Phragmites communis
Pickerel grass	Pontederia cordata
Arrowheads	Sagittaria spp.
Spatterdock	Nuphar variegatum
Red maple	Acer rubrum
Atlantic white cedar	Chamaecyparis thyoides

Table 10-13 WETLAND VEGETATION – INLAND WETLANDS	
Common Name	Scientific Name
Atlantic White Cedar Swamps	
Atlantic White Cedar	Chamaecyparis thyoides
Red Maple	Acer Rubrum
Sweetbay	Magnolia virginiana
Blackgum	Nyssa sylvatica
Dangleberry	Gaylussacia frondosa
Highbush bluberry	Vaccinium corymbosum
Swamp azalea	Rhododendron viscosum
Fetterbush	Leucothoe racemosa
Sweet pepperbush	Clethra alnifolia
Inkberry	Ilex glabra
Pitcher plant	Sarracenia purpurea
Sundew	Drosera spp.
Cinnamon fern	Osmunda cinnamomea
Royal fern	Osmunda regalis
Sphagnum moss	Sphagnum spp.
Hardwood Swamps	
Red maple	Acer rubrum
Blackgum	Nyssa sylvatica
Sweetbay	Magnolia virginiana
Gray Birch	Betula popuifolia
Pitch pine	Pinus rigida
Atlantic white cedar	Chamaecyparis thyoides
Sweetgum	Liquidambar styraciflua
Sweet pepperbush	Clethra alnifolia
Highbush blueberry	Vaccinium corymbosum
Swamp azalea	Rhododendron viscosum
Fetterbush	Leucothoe racemosa
Letherleaf	Chamaedaphne calyculata
Dangleberry	Gaylussacia frondosa
Cinnamon fern	Osmunda cinnamomea
Chain fern	Woodwardia spp.
Rushes	Juncus spp.
Sweetgum	Liquidambar styraciflua
Pin Oak	Quercus palustris
Willow Oak	Quercus phellos

Table 10-13 WETLAND VEGETATION – INLAND WETLANDS	
Common Name	Scientific Name
Pitch Pine Lowlands	
Pitch Pine	Pinus rigida
Red Maple	Acer rubrum
Blackgum	Nyssa sylvatica
Gray birch	Betula populifolia
Leatherleaf	Chamaedaphne calyculata
Dangleberry	Gaylussacia frondosa
Sheep laurel	Kalmia angustifolia
Highbush blueberry	Vaccinium corymbosum
Sweet pepperbush	Clethra alnifolia
Wintergreen	Gaultheria procumbens
Bogs	
Cranberry	Vaccinium macrocarpon
Leatherleaf	Chamaedaphne calyculata
Sheep laurel	Kalmia angustifolia
Highbush blueberry	Vaccinium corymbosum
Swamp azalea	Rhododendron viscosum
Sweet pepperbush	Clethra alnifolia
Dangleberry	Gaylussacia frondosa
Staggerbush	Lyonia mariana

In addition, water bodies are defined as wetlands, whether they contain water permanently or seasonally, including lakes, ponds, bays, rivers and streams.

MOTT, POLISTINA & ASSOCIATES, LLC
CONSULTING ENGINEERS & PLANNERS

River Management Plan

For

The Great Egg Harbor National Scenic
and Recreational River

For
Egg Harbor Township
Atlantic County, New Jersey

Prepared By:
Mott, Polistina & Associates
3122 Fire Road
Egg Harbor Township, NJ 08234
Phone: (609) 569-1551
Fax: (609) 569-1521

January 2002

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Introduction

Development pressure, changed patterns of recreational use, threats to wildlife and historic sites, and the prospect of substantial withdrawals from public water supply systems have motivated concern for the future of the Great Egg Harbor River. In 1986 legislation was passed authorizing a study of the Great Egg Harbor River and its tributaries to determine their eligibility and suitability for inclusion in the National Wild and Scenic River System. The Final Study Report was completed five years later detailing the river's sections that were/are eligible for designation and the resources in need of protection.

One hundred twenty nine (129) miles of the Great Egg Harbor River and its tributaries were designated as part of the National Wild and Scenic Rivers System in 1992. Three river segments on the main stem that total 39.5 miles and an additional 89.5 miles of tributaries were included as part of this designation. These water bodies are surrounded by 85,000 acres of associated wetlands, transitional lands and their watershed.

Congress envisioned the National Scenic and Recreational Rivers System as a cooperative effort, relying on the actions of private individuals and groups, as well as all levels of government. The National Wild and Scenic Rivers Act provides communities whose rivers flow across non-federal lands with a method for protecting river corridors that are sensitive to specific local needs and concerns. The Act provides the framework for Egg Harbor Township to develop a sensible conservation strategy for the Great Egg Harbor River, its tributaries, and watersheds.

Egg Harbor Township needs to complete the development and implementation of a River Management Plan in order to attain permanent protection for the Great Egg Harbor River.

Description of the Great Egg Harbor River

The Great Egg Harbor River is located in southern New Jersey. It is located within two miles of a major metropolitan area – Philadelphia, Pennsylvania. Other heavily developed areas such as Camden, Cherry Hill and Gloucester City surround the river. It is also located approximately four miles north of Wilmington, Delaware and six miles south of Trenton, New Jersey. The Great Egg Harbor River passes through, or along, four counties and twelve municipalities. They include:

- *Atlantic County* – Corbin City, Egg Harbor Township, City of Estell Manor, Folsom Borough, Hamilton Township, Somers Point, and Weymouth Township
- *Camden County* – Winslow Township
- *Cape May County* – Upper Township
- *Gloucester County* – Monroe Township

The headwaters of the River begin in Winslow Township, Camden County. It flows south for roughly 59 miles through the Pinelands, into the Great Egg Harbor Bay, and finally out to the Atlantic Ocean.

In 1978 the Congress of the United States established the Pinelands National Reserve. The areas within the Pinelands National Reserve are recognized as environmentally critical for wildlife species that are unique to this region. The "watershed" of the Great Egg Harbor River is a crucial element to nearly 304 square miles of wetlands within the New Jersey Pineland National Reserve. Almost all of the eligible waterways and adjacent lands that surround the river are located within the jurisdictional boundary of the Pinelands National Reserve.

Description of Egg Harbor Township

Egg Harbor Township is located in the southern portion of Atlantic County, New Jersey. The Township is approximately 68 square miles in size. The southern boundary of the Township is the Great Egg Harbor River. Galloway Township is located to the north, Pleasantville and Northfield to the east and Hamilton Township to the west. The eastern portion of the Township – West Atlantic City, Seaview Harbor, Anchorage Point, and the Margate Causeway – are physically separated from the inland portion of the Township and consists of islands and peninsulas of salt meadows. This area consists primarily of "manmade" or filled lands.

Egg Harbor Township lies within the lower portion of the Great Egg Harbor watershed, within the jurisdiction of New Jersey Department of Environmental Protection (NJDEP) and the Pinelands Commission. The Township has access to 31.89 miles of water frontage that includes the Great Egg Harbor River and four of its tributaries – Patcong Creek, Miry Run, English Creek and Lakes Creek. Approximately 11% of the total available river frontage for the Great Egg Harbor River is in Egg Harbor Township.

The 1990 Census estimated that the population of Egg Harbor Township was approximately 25,000 persons. The New Jersey Department of Labor predicts that the population of the Township will reach 30,000 persons in year 2000. Table 1 – *"Population Estimates 1930 through 2010 For Egg Harbor Township, Atlantic County and State of New Jersey"* shows the historic population estimates, increase in the number of residents, and percent of change in population for these areas. Figure 1 – *"Population Estimates 1930 through 2010 For Egg Harbor Township and Atlantic County"* graphically depicts the population estimates and increases during this same period.

Table 10-14
Population Estimates 1930 through 2010
For Egg Harbor Township, Atlantic County, and State of New Jersey

Year	Egg Harbor Township			Atlantic County			New Jersey		
	Population	Increase	Percent	Population	Increase	Percent	Population	Increase	Percent
1930	3,024	--	--	124,823	--	--	4,041,334	--	--
1940	3,066	42	1.38%	124,066	-757	-.60%	4,160,165	118,831	2.94%
1950	4,991	1,925	62.78%	132,399	8,333	6.71%	4,835,329	675,164	16.23%
1960	5,593	602	12.06%	160,880	28,481	21.51%	6,066,782	1,234,453	25.47%
1970	9,882	4,289	76.68%	175,043	14,163	8.80%	7,168,164	1,101,382	18.15%
1980	19,381	9,499	96.12%	194,119	19,076	10.89%	7,365,011	196,847	2.75%
1990	24,544	5,163	26.63%	224,327	30,208	15.56%	7,730,188	365,177	4.95%
2000	30,125	5,581	22.74%	244,900	20,573	9.17%	8,191,300	461,112	5.96%
2010	36,255	6,130	20.35%	270,100	25,200	10.29%	8,601,500	410,200	5.01%

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, February 2, 2000 and http://www.census.gov/population/cencounts/nj11900909.txt. Compiled by Mott, Polistina & Associates, February 7, 2000.

As noted in Table 1, the largest population increases for Egg Harbor Township occurred in the 1980s (96%), 1970s (77%), and 1950s (63%) respectively. Overall, the Township has increased by over 27,000 residents or nearly nine times the base population of 1930. These estimates far exceed the growth rate for the County and the State. Between 1930 and 2000, Egg Harbor Township accommodated over 20% of the population increase in Atlantic County.

The prodigious increases in population since the 1980s is due to the fact that the Township has been designated as a Pinelands "regional growth" area. This designation mandates that the Township accommodate a predetermined amount of growth for the entire region in accordance with the Pinelands Comprehensive Management Plan.

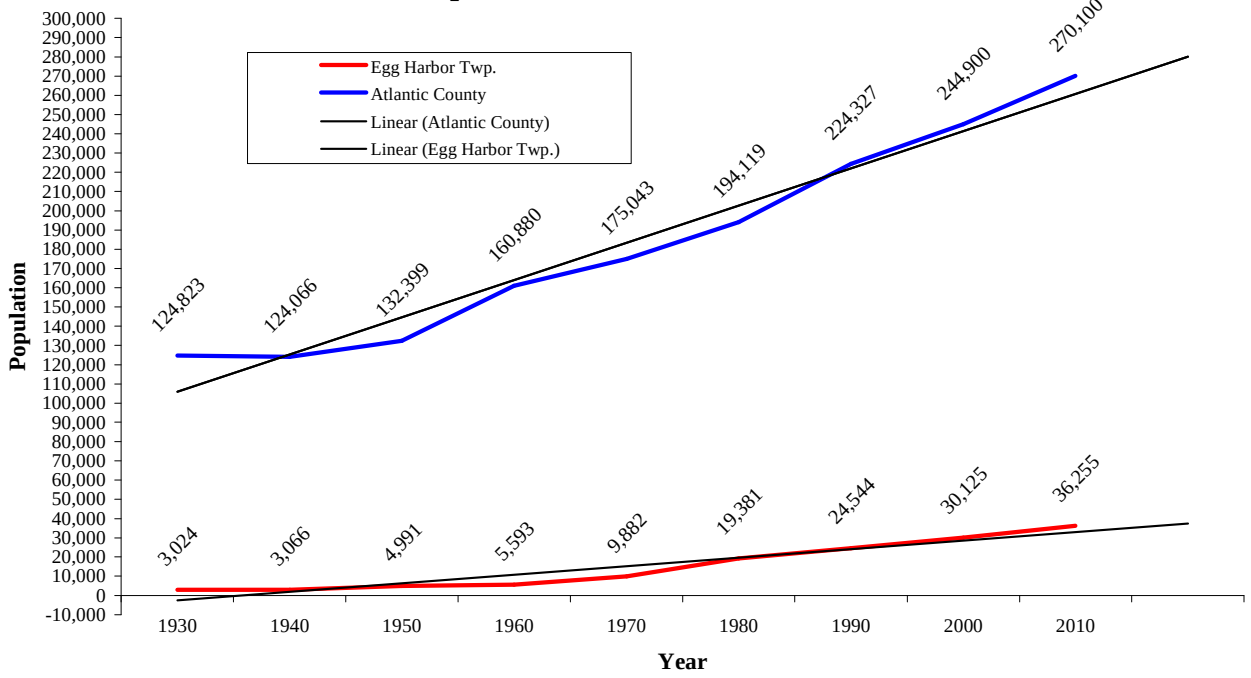
The population for Atlantic County and the State of New Jersey has continued to increase as well. Population increases for Atlantic County occurred in every decade from 1930 to 2000, with the exception of the 1940s. During this decade the County lost less than 1% of its population. The largest population increases for the County occurred between 1960 and 1970 (22%), 1990 and 2000 (16%) and 1960 and 1970 (11%) respectively. The population of the County increased by 120,000 residents or nearly doubled (96% increase) between 1930 and 2000.

The State of New Jersey doubled its population between 1930 and 2000 and increased the number of residents by over 4,000,000 people during this period. The three decades that

exhibited the greatest increases were the 1960s (25%), 1970s (18%), and 1950s (16%) respectively.

Population projections for Egg Harbor Township, Atlantic County and New Jersey are predicted to continue to increase at approximately the same rate through the year 2010.

Figure 10-7
Population Estimates 1930-2010



Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, February 2, 2000. Compiled by Mott, Polistina & Associates, February 3, 2000. Projections for 2010 for Egg Harbor Township and "trend line" prepared by Mott, Polistina & Associates, February 14, 2000.

Table 2, *"Number of Housing Units – 1990 and 2000, Egg Harbor Township, Atlantic County, and State of New Jersey,"* depicts the number of housing units that were counted in the 1990 Census, the total number of new residential units constructed between 1990 and 1999, and the projected number of housing units in 2000 for the Township, County and State. (The increases are based on the information provided in Table 3 listed below.) Egg Harbor Township increased their total number of residential dwelling units by 2,278 or by approximately 23% during this decade. This increase also represents one-quarter (25%) of the housing for the County and almost 1% of the housing for the State (0.97%) during the 1990s.

Table 10-15
Number of Housing Units 1990 and 2000
Egg Harbor Township, Atlantic County, and State of New Jersey

	Housing Units 1990	Increase in New Housing Units 1990-1999	Housing Units 2000	Housing Units 2010
Egg Harbor Twp.	10,018	2,278	***12,296***	***14,574***
Atlantic County	106,877	9,083	***115,960***	***125,043***
New Jersey	3,307,378	234,428	***3,307,738***	***3,542,166***

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, February 2, 2000. Compiled by Mott, Polistina & Associates, February 3, 2000. Projections for 2010 prepared by Mott, Polistina & Associates, February 14, 2000.

Table 3, *"Building Permits Issued Between 1980 and 1999, Egg Harbor Township, Atlantic County, and State of New Jersey"* and Figure 2,*"Building Permits Issued Between 1980 and 1999, Egg Harbor Township and Atlantic County"* depict the number of new residential dwelling units and single family houses that were constructed between 1980 and 1999 for Egg Harbor Township, Atlantic County and the State.

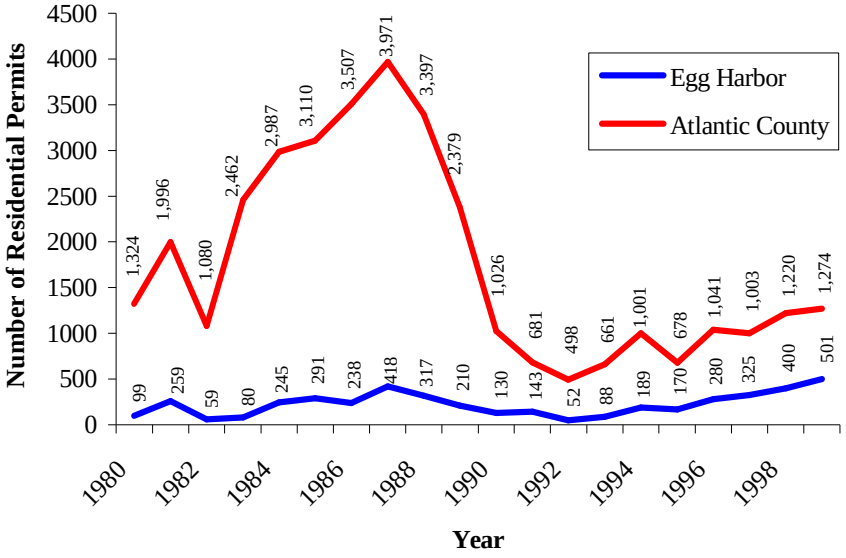
Table 10-16
Building Permits Issued Between 1980 to 1999
Egg Harbor Township, Atlantic County, and State of New Jersey

Year	Egg Harbor Township		Atlantic County		New Jersey	
	Single Family	Total	Single Family	Total	Single Family	Total
1980	99	99	692	1,324	14,780	22,270
1981	59	259	728	1,996	12,329	20,676
1982	59	59	611	1,080	14,005	21,297
1983	80	80	718	2,462	25,539	35,897
1984	181	245	950	2,987	32,513	43,787
1985	291	291	1,231	3,110	39,216	55,027
1986	238	238	1,368	3,507	42,607	57,353
1987	173	418	1,780	3,971	36,497	51,462
1988	193	317	1,620	3,397	28,452	40,909
1989	198	210	1,412	2,379	20,880	30,337
1990	126	130	670	1,026	12,801	17,524
1991	139	143	494	681	14,856	12,869
1992	52	52	484	498	19,072	16,506
1993	88	88	622	661	21,340	25,188
1994	189	189	987	1,001	22,437	25,388
1995	170	170	561	678	18,341	21,521
1996	201	280	917	1,041	20,853	24,173
1997	316	325	994	1,003	23,472	28,018
1998	400	400	1,148	1,220	25,459	31,345
1999	501	501	1,100	1,274	23,312	29,896
Total	***3753***	***4494***	***19,087***	***35,296***	***468,761***	***611,443***

Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, February 2, 2000. Compiled by Mott, Polistina & Associates, February 3, 2000.

Approximately 83% of the housing constructed in Egg Harbor Township during this twenty-year period is single-family dwellings. This is slightly higher than the State average of 77% and significantly higher than the County average of 54% during this same period.

Figure 10-8
Residential Building Permits Issued 1980 to 1999
for Egg Harbor Township and Atlantic County



Source: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation, February 2, 2000.
Compiled by Mott, Polistina & Associates, February 3, 2000.

Table 10-17
Proposed Developments – CRW & RA Zones
Egg Harbor Township, Atlantic County, New Jersey

No.	Name of Development	No. of Lots	Location
1	Twisted Dune Golf Course	---	Ocean Heights Ave. between Zion Rd. & English Creek Ave.
2	Thomas Subdivision	187	Zion Rd. between English Creek Ave. & Ocean Heights Ave.
3	Harbor Acres	115	Zion Rd. between English Creek Ave. & Ocean Heights Ave.
4	Bartley Subdivision	30	School House Rd. between Zion Rd.
5	Stone Mill Estates	22	Zion Rd. near School House Rd.
6	Devon Ridge	32	Robert Best Rd. near Zion Rd.
7	Rhonda Court	9	Robert Best Rd. near Zion Rd.
8	Harbor Pines	350	Steelmanville Rd. near Ocean Heights Ave.
Total Number of Proposed Lots		***745***	

Table 4 identifies the major proposed developments near the proposed River Management Area. There are 8 major developments with 745 residential lots proposed for this area. The number of new residents these developments would generate is

calculated by taking the average number of persons per household from the 1990 Census and multiplying by the number of proposed lots.

The average number of persons per household in 1990 was 2.45. Multiplying this figure by the number of proposed residential lots (745 new lots) yields approximately 1,825 additional residents. As noted in Figure 1, the projected population for Egg Harbor Township in 2010 is 36,255 persons. The projected population from these proposed developments is over 30% of the anticipated growth for the next decade for the entire Township. It is unlikely that any additional large subdivisions or development will occur in the proposed River Management Area due to the pattern of existing development and environmental constraints such as wetlands, and flood hazard areas.

Description of the Tributaries in Egg Harbor Township

There are five large tributaries of the Great Egg Harbor River located in Egg Harbor Township - Patcong Creek, Miry Run, English Creek, Perch Cove Run and Lakes Creek. Several other smaller tributaries such as Landing Creek, Mathis Run, Powell Creek, Flat Creek, Mill Creek, Elder Creek, Nell Run, Wharf Creek, Bond Point Creek, and Job's Point Creek are also located in the Township.

- **Patcong Creek** is the largest tributary. It is the eastern border of Egg Harbor Township and physically separates the Township from Linwood and Somers Point. This Creek is approximately 3 miles long and travels from Bargaintown Pond, under Ocean Heights Avenue – Alternate County Route 559 – and the Garden State Parkway, and terminates in the Great Egg Harbor River.

  This tributary is classified as "recreational" from the mouth of the Great Egg Harbor River to the Garden State Parkway in the *Final Guidelines for Local River Management Plans* ("Final Guidelines"), prepared by the Great Egg Harbor River Management Planning Committee. One of the unique features of this tributary is the presence of tidal marshes almost the entire length of the Creek to Bargaintown Pond.

- **Powell Creek** is approximately one and one-half miles south of Perch Cove Run and approximately the same distance north of English Creek. It is approximately two miles in length and runs from the River Bend County Park Expansion, through Powell Creek Natural Area, and along the Egg Harbor River Campground before reaching the Great Egg Harbor River.

- **Lakes Creek** is approximately one and one-half miles south of English Creek. It is approximately three and one-half miles long and runs from Zion Road through Sleepy Hollow Campground, across Mays Landing-Somers Point Road and into the Great Egg Harbor River.

- **Miry Run** forms the northern border of Egg Harbor Township and the southeastern border of Hamilton Township. It is approximately four miles in length and travels through the Hamilton Trails Golf course and under Ocean Heights Avenue –

Alternate County Route 559. Almost half (½) of this tributary is classified as "Recreational" in the Final Guidelines.

- **Perch Cove Run** is slightly over one and one-half miles south of the Miry Run. The path of this tributary is less than one mile in length and runs from the Great Egg Harbor River, under Route 559 – Somers Point Mays Landing Road – and into the Atlantic County Golf Course. The Final Guidelines do not classify this tributary.

- **English Creek** is approximately 3 miles northwest of Patcong Creek. It passes under Route 559 – Somers Point Mays Landing Road – to Route 615 – Zion Road. The total length of this tributary is 3.73 miles. This tributary is one of the most documented in the history of the Township. Most of English Creek is also classified as "Recreational" in the Final Guidelines.

Historical Context of Egg Harbor Township to the Great Egg Harbor River

A fresh supply of water is critical to man's survival. Major rivers have supplied fresh water and a viable integrated transportation system to humans throughout time. The Lenni Lenape Indians were the first known inhabitants of the region and used the river as a source of food and water and for transportation.

Many of the first colonial settlements in Egg Harbor Township were along the Great Egg Harbor River. Footpaths and trails were created along the river's edge that connected these early settlements. As formal roads developed, these establishments eventually grew into small communities and towns such as Scullville and Steelmanville. These towns had a physical, economic, and social connection to the water.

During the Revolutionary War the New York Harbor was closed and the Delaware Bay blockaded. Because of the blockade, the Mullica and Great Egg Harbor Rivers gained prominence in the Mid-Atlantic Region. These rivers were used to transport supplies to the colonial armies. Skirmishes between the Colonists and the British forces frequently occurred along the rivers in the coastal areas of southern New Jersey.

Shipbuilding was a major industry that employed many of the residents in the Township. The area had an ample supply of cedar timber, limonite ore was found in the local streambeds, and the tidal waters of the tributaries provided access to the Great Egg Harbor River and the Atlantic Ocean. Ships and shipbuilding were of such importance to the industry and well being of the area that a ship's launching was treated as a local holiday.

By 1800 the shipyards in southern New Jersey supplied ten percent of the vessels used for commerce in the Philadelphia region. Small boat builders played an important role in the communities along the coast and major estuaries, especially the Mullica, Great Egg Harbor, Maurice and Toms Rivers. Egg Harbor Township contributed significantly to this trade at five different locations.

- **English Creek** was settled in 1714 and named after the "English" family who settled there. It eventually had two historical sites that gained notoriety as

shipbuilding centers – Bargaintown and the Ship Yard at English Creek. The types of ships built at these two locations were smaller than vessels constructed at Mays Landing because of the limited width and depth of tributary.

A small shipbuilding complex was constructed in Bargaintown in the early 1800s. An existing grist mill, blacksmith shop and saw mill provided the necessary trades to support this industry.

Israel Smith was a master carpenter and ship builder. Historical records document Smith as constructing ships in English Creek. Some of the ships constructed there included two and three mast schooners. Smith is credited with the construction of more than fifteen ships at this specific location.

- **Jeffers Landing** was named for the John Jeffrey's family that maintained a plantation and spacious mansion near the water's edge. This local port was important to the early commercial river economy. It was so prosperous that a "wharf master" was appointed in 1819.

By the middle of the 1800s the wharf was neglected, had fallen into disrepair, and was eventually removed. Small private vessels and scows continued to load produce from the surrounding farms for transport to Atlantic City. The cordwood from the local forests was loaded onto small sailing sloops and transported to other regional markets such as Philadelphia and New York where it was manufactured into bricks.

As the rail lines gained popularity and the shipping trade declined, Jeffers Landing became a prominent bathing site. The gently sloping sandy shores in the cove provided a safe place for local residents to sunbathe. In the late 1800s a bathhouse was built to accommodate the patrons. It was destroyed by heavy winds and tidal forces and never rebuilt.

- **Clarkstown** gained prominence in the late 1700s when a local Revolutionary war hero – Christopher Rape – established a blacksmith shop and shipyard. His son continued the family tradition of shipbuilding and also ran the local general store. Over 35 shipbuilders built 200 ships in the hundred years that shipbuilding remained the primary means of transportation.

- **Morris Beach** is located at the mouth of the Patcong River. Local historians have documented an unnamed "shipping point" at the head of the Tuckahoe River in 1864. The most likely location of this shipping point was Morris Beach.[1]

Christopher van Sant was a shipbuilder that constructed ships in Northfield. He was commissioned to build a "fully rigged sailing vessel" and found that there were no suitable rivers in Northfield to launch such a craft. He chose a location

[1] Somers Point is the only other shipping point at the mouth of the Tuckahoe River. It is a highly documented shipping location located further east on the Great Egg Harbor River.

on the Patcong Creek near Morris Beach to construct the ship. The launching of this vessel was greeted with great celebration.

- **Job's Point** is not known for its shipbuilding, but as the site for a ferry between Great Egg Harbor and Cape May. On October 2, 1695, John Somers was granted permission by the Grand Jury of Gloucester County to provide service across the Great Bay. The ferry departed from Job's Point, crossed the Bay and headed south to Cape May.

The meadows along the tidal water in the Great Egg Harbor River produced an unusual crop for the local farmers. Salt hay was in great demand for livestock bedding, especially in the livery stables in cities. The Harrisville paper mill in Burlington County also used the salt hay in the production of paper for a very short time.

During the first half of the 1800s, numerous railroads, turnpikes, and canals were constructed. The ability to deliver goods and services to the urbanized areas in days rather than weeks changed rural life and hastened the movement of laborers into cities. By the 1860s, the railroads and turnpikes forged the majority of the transportation links to the marketplaces of New York City and Philadelphia. As part of these improvements, a coastal railroad was constructed between Philadelphia and Atlantic City. Introduction of the first form of mass transit between Philadelphia and Atlantic City fueled the tourist trade and introduced a new "industry" into the regional economy.

The Industrial Revolution and introduction of mass production changed the labor market and small towns throughout the country grew into thriving industrial centers. Changes in the social, physical, and economic environment in the late 1800s and early 1900s eventually eliminated the need for sea faring vessels from the local economy. Roads existed where there had been none before. The railroads had been firmly established and carried more freight faster and cheaper than by water. The last large schooner was built in Egg Harbor Township in 1895.

The introduction of the private automobile and the international conflicts of World War I and II saw the need for an integrated national highway system. The completion of the Atlantic City Expressway and Garden State Parkway in the late 1940s and 1950s opened the "mainland" region and Egg Harbor Township to development. The population estimates from the decade of the 1950s are evidence of this rapid expansion.

Egg Harbor Township continues to develop and expand. Most of the non-residential development in the Township continues along the major corridors of the Black Horse Pike (Route 40) and interchanges on the Garden State Parkway and Atlantic City Expressway. The Great Egg Harbor River continues to be a vital part of the Township. It is enjoyed as a scenic, recreational, and environmental asset.

The proposed River Management Area boundaries are limited to only 2 zoning districts in Egg Harbor Township – CRW (Conservation-Recreation-Wetland) and RA (Residential Agricultural). Table 5 lists the minimum lot sizes required in each zoning district, the amount of vacant developable land, and approximate remaining number of building lots in each zoning district.

Table 10-18
Zoning Districts in Proposed River Conservation Zone
Egg Harbor Township, Atlantic County, New Jersey

Zoning District	Minimum Lot Size	Acres of Vacant Developable Land	Approximate # of Bldg. Lots Remaining
RA – Residential Agriculture	2.3Acres	1,700	530
CRW – Conservation-Recreation-Wetland	5 Acres	250	50

Source: *Code of Egg Harbor Township*, §225-7, December, 1998.

Based on the information provided in Table 10-18, there are approximately 580 lots remaining that could be developed in the RA and CRW zones.

Egg Harbor Township needed to determine the significance of the Great Egg Harbor River in the Township; if adequate measures exist to protect the river, and if not; appropriate and realistic measures that could be enacted at the local level to accomplish this task. A three-step process was used to complete this analysis:

1. **Identify significance of the river within the Township**. The Township analyzed their local land use ordinance and Master Plan; an existing "attitude survey" developed by Stockton State College specifically for this project; and the *Guidelines for Local River Management Plans* prepared by the Great Egg Harbor River Management Planning Committee with assistance from the National Park Service.

2. **Comparison of information.** The Township compared the degree of protective measures for the river into local regulatory documents, the disposition of the general local population regarding the significance of the river, and the goals and objectives of the *Guidelines for Local River Management Plans* for consistency or discrepancies.

3. **Development of guidelines and recommendations.** Based on the information obtained in Step 2 – Comparison of Information – the Township determined that changes in the Land Use Ordinance and Master Plan should be enacted to provide increased protection of the river and its tributaries within Egg Harbor Township.

Community Opinion

In 1989 the South Jersey Center for Public Affairs at Stockton State College surveyed landowners near the Great Egg Harbor River to determine their opinions about the river. Approximately 460 surveys were distributed. Over one-third – 36.4 % or 168 surveys – were received. Almost all (98 %) of the residents in the "lower" or "middle" portions of the Great Egg Harbor River responded. Hamilton Township, Corbin City, Egg Harbor Township, Estelle Manor, Somers Point, and Weymouth Township comprise the lower and middle portions of the Great Egg Harbor River. Five comments were commonly reiterated throughout the responses. They include:

1. The most important aspect to the respondents is that the river is viewed as a "good place to live." They also viewed the river as contributing to the overall quality of their lives.

2. Water quality, the rights of landowners, and protection of underdeveloped land were the issues that were of greatest concern to the respondents.

3. More than 80% of respondents support land use regulations to protect the river's environment and are opposed to aggressive development of the river.

4. The respondents viewed river conservation as both a personal and local issue. They also believe that local government, private groups, and the landowners themselves have the bulk of the responsibility for conserving these natural resources.

5. Most respondents do not believe that government agencies are meeting the conservation needs of the river. Approximately 75% of the respondents also believe that they as landholders should practice conservation on their individual property.

The general public opinion is that communities located near the Great Egg Harbor River benefit from the scenic, recreational, historic, social, and cultural qualities inherent in this river. It is also typically believed that a scenic and recreational designation increases property values and that people consider it desirable to own property near a designated river. Residents experience a heightened sense of pride and an eagerness to help preserve the beauty and character of the river and its associated watershed.

In June 1995 the communities that surround the river were once again asked to participate in a survey to determine their interest and opinions. The results of this survey indicate a compelling consensus that the character of the River must be managed to promote wildlife and habitat protection.

Comparison of Community Opinions with Current Protection Measures

The Great Egg Harbor River is recognized as a valuable natural resource in the local community, region, state, and by the federal government. The result of surveys within the Township indicate a belief and desire by the residents that the river is a valuable natural asset and that it should continue to be protected.

Local, state and federal government agencies currently have the authority to regulate the river. The designation of the river into the national system did not alter or diminish the authority of the municipal land use regulations, the Pinelands Comprehensive Management Plan, and the CAFRA regulations. The agencies responsible for these regulations will continue to provide the primary protection for the river and its watershed. The federal designation is an additional mechanism that is designed to stimulate, enhance, and coordinate local, regional and statewide river protection efforts.

The Master Plan and Land Use Ordinance of Egg Harbor Township affords protection to the Great Egg Harbor River. The Township Ordinance restricts the type and intensity of uses permitted in proximity to the river. It also establishes additional setbacks to properties located immediately adjacent to the river. The Ordinance allows the Township to review any proposed project within 1,000 feet of the river for potential impacts on its viewshed.

The Township is concerned about environmental impacts and has recently enacted measures to reduce or mitigate possible detrimental impacts. A program was developed to monitor runoff from local golf courses. The Township has also developed standards to ensure that recharge of the local tributaries will not be obstructed. As part of the preparation of the new Master Plan, the Township is analyzing the effects of

development. Based on the findings of this analysis, the Township will decide if additional design standards are needed, and if so, implement these standards.

New Jersey Pinelands Commission

In 1978 the United States Congress established the Pinelands National Reserve as part of the Pinelands Protection Act (Act.) As part of this Act, the Pinelands Commission ("the Commission") was given numerous pre-eminent land use regulatory powers. The Commission was charged with preparing a comprehensive plan that would guide growth into appropriate areas while providing protection to lands that were environmentally sensitive.

The Commission prepared the Pinelands Comprehensive Management Plan ("the Plan") and it was enacted in 1981. Under the provisions of the Plan, all municipalities located partially or wholly in the Pinelands are responsible for reviewing their land use and regulatory documents – Master Plans and Zoning Ordinances – to determine if they are consistent with the Plan. If a municipality is consistent with the Plan the Commission certifies their land use ordinance. Egg Harbor Township was deemed compliant with the Plan and received their certification from the Pinelands Commission in 1992.

Egg Harbor Township is classified as a "regional growth" area in the Plan. As a regional growth area, the Township is required to accommodate a predetermined amount of growth for the entire region subject to the Pinelands jurisdiction. The implications have resulted in unprecedented levels of growth in Egg Harbor Township.

New Jersey Department of Environmental Protection

New Jersey enacted the Coastal Area Facilities Review Act (CAFRA) in 1978 to execute the Federal Coastal Zone Management Policies. The New Jersey Department of Environmental Protection (DEP) is responsible for implementing several regulations including the Coastal Area Facilities Review Act (CAFRA). The areas that are subject to CAFRA jurisdiction are located near coastal waters in the southern part of the State. CAFRA rules apply to almost all development activities including construction; relocation or expansion of buildings or structures; and related on-site improvements such as excavation, grading, and bulkheads or docks. Land located adjacent to the tidal waters within CAFRA jurisdiction (coastal areas) often contain coastal wetlands. Coastal wetlands are protected under the Wetlands Act of 1970.

DEP also implements other regulations such as the Waterfront Development Law, the Tidelands Act, and the Freshwater Wetlands Protection Act. The Waterfront Development Law applies to all areas in New Jersey that involve tidally flowed waterways. Any development that is proposed in a general tidal area (non-coastal) requires a Waterfront Development Permit. The Freshwater Wetlands Protection Act protects the transition or "buffer" areas around freshwater wetlands.

Lands that are or were previously flowed by the tide of a natural waterway are classified as tidelands. Tidelands are owned by the State. A tidelands license, lease or grant is required in order to develop on these areas. All regulations pertaining to tidelands are contained in the Tidelands Act.

Egg Harbor Township

The Township has determined that the Great Egg Harbor River, its tributaries, and associated lands should be designated as a "River Management Area." The boundary of the proposed River Management Area is the Great Egg Harbor River between Miry Run and the mouth of the Patcong Creek. Figure 10-9 – *"The Recommended Management Boundaries Map,"* delineates the boundary of the proposed River Management Area within the Township.

The proposed River Management Area is located in areas subject to Pinelands and CAFRA jurisdiction. It is comprised of areas that are largely wetlands and flood prone. Figure 10-4 – *"Flood Prone Areas Map,"* depicts the portion of the River Management Area that is subject to flooding.

The Conservation Element is the environmental core of the Master Plan. This element identifies particular areas of the Township appropriate to conserve, preserve, or utilize. Specific goals, objectives, and assumptions that will help the Township preserve their natural resources and encourage development that respects the limited capacity of these systems will be contained in the Conservation Element. This River Management Plan will be incorporated as part of the Conservation Element.

The recommendations contained in this River Management Plan will then be incorporated into the Township's Land Development Ordinance. This River Management Plan is consistent with the Wild and Scenic River Guidelines. As a result, Egg Harbor Township's Master Plan and development regulations will also be consistent with the Final Guidelines contained in the Wild and Scenic River Guidelines.

The Township has evaluated the policies contained in the Issues and Recommended Actions portion of Section VI, Resource Management Issues, Goals & Prescriptions of the Comprehensive Management Plan for the Great Egg Harbor River. The following policies are implemented by the Township and/or incorporated as part of the Ordinance:

A. Cellular and telecommunication towers are not expressly permitted in the CRW, RA and R-1 zoning districts. These uses are proposed as a permitted accessory use to independent volunteer fire stations that might be constructed in the proposed River Conservation Zone.

B. The Township is working diligently with DEP to review and monitor the number and size of docks permitted on the river.

C. Resource extraction is listed as a prohibited use in the proposed River Conservation Zone. Sand and Gravel mining operations are also expressly prohibited in this Ordinance.

D. The Township has streamlined their regulation process. In 1992 the Pinelands Commission certified the Township Code. The Township has worked closely with the County, State, and Pinelands Commission to coordinate all development applications within the Township. The preparation of the River Conservation overlay-zoning district will exceed the CAFRA standards.

E. As stated previously, the Township has recently developed a monitoring program for runoff from local golf courses and standards to ensure that recharge of the local tributaries of the river will not be obstructed. The Township is also analyzing the impacts of development within the Township. If this study finds that the current development standards need to be revised or increased, modifications will be made accordingly.

F. Development standards currently exist that require applicants to design their proposed development so that there will be no increase in runoff or stormwater discharge from the site. Additionally, all development in the Pinelands portion of the Township is required to provide a retention drainage basin rather than a detention drainage basin where no public facilities are available. The use of a retention basin permits for the direct recharge of stormwater into the site.

The following policies are deemed appropriate for incorporation into the Ordinance of Egg Harbor Township and will be integrated in connection with the adoption of the EHT Master Plan:

A. The Township has already identified the Great Egg Harbor and its tributaries as an invaluable natural resource. The Township will identify any other natural and cultural resources that are significant to the local and regional history.

B. A “No Discharge Zone” will be created along the Great Egg Harbor, Patcong Creek, English Creek, and Miry Run. The Township will work with applicants to designate specific locations for pump-out facilities for boats with on-board sewerage. In an effort to further reduce the amount of effluent discharge into open water, the Township will also assist the applicant in applying for a Clean Vessel Program grant administered by NJDEP to construct, renovate, operate and maintain pump-out and dump stations.

C. The Township adheres to Atlantic County's emergency management procedures especially regarding bridge and road repair work. The Township will work with Atlantic County to enhance coordination among emergency management personnel along the Great Egg Harbor River.

D. As part of this River Management Plan, "Areas of Critical Protection" were identified. Figure 10-4 - *"Flood Prone Areas"* delineates the documented and undocumented areas near the Great Egg Harbor River and its tributaries that are prone to flooding. Appendix 2 - *"Rare Species and Natural Communities Present"* identify the areas that are critical resources and are targeted for protection. The Township will work with Atlantic County and the State of New Jersey – through Green Acres and other Open Space Preservation programs – to secure ownership or conservation easements to these lands wherever feasible.

The Township has appointed an Environmental Commission and has also prepared a Master Plan for Open Space and Recreation. In this Plan, the Township adopted a goal of "promoting the conservation of open space and valuable natural resources…" The Plan references the National Scenic and Recreational River System and states that the Township will "examine its land use policies" as they relate to the *"Final Guidelines for Local River Management Plans for the Great Egg Harbor Scenic and Recreational River."*

Nearly all of the land area located in the local river management boundary in Egg Harbor Township is classified in one zoning district, the CRW (Conservation-Recreation-Wetland) District. Some of the river's tributaries stretch into the RA (Rural Agriculture) and R-1 (Residential) districts. The existing and proposed (Figures 7-2 and 12-2, respectively) Zoning Maps delineate all the relevant zoning districts and their boundaries.

Section 4 Resources of the Great Egg Harbor River and its Tributaries

The Great Egg Harbor River is fortified with a wide array of natural, cultural and recreational resources. These resources are the essential components that made the Great Egg Harbor River a candidate for designation as part of the Natural Wild and Scenic River System. The nine predominant features of the river and its tributaries are listed below.

Regional Setting

The Pinelands National Reserve encompasses a majority of the river area. It is recognized as a nationally significant resource because of its large pine-oak forest, extensive high quality surface and groundwater resources, and wide diversity of rare/ endangered plant and animal species. The Pinelands National Reserve is also internationally recognized as a unit of the South Atlantic Coastal Plain Biosphere Reserve under the United Nation's "Man and the Biosphere" program.

Scenic Resources

The Great Egg Harbor River and its tributaries contain an abundance of scenic landscapes – lakes, streams, pristine forest areas, and cedar / hardwood swamps. The Pinelands Comprehensive Management Plan designates the lower and middle portions of the river and its tributaries as scenic corridors of "special significance" within the Pinelands.

Cultural Resources

The adjacent lands along the lower Great Egg Harbor River and its tributaries contain a number of historically significant sites to southern New Jersey maritime history – English Creek, Jeffers Landing, Clarkstown, and Morris Beach. English Creek is also documented as a site instrumental in the development of the bog iron industry.

Several sites are either listed on or eligible for designation on the National Register of Historic Places, the New Jersey Office of Historic Places, and the Pinelands Commission. The Lenni Lenape Indians are documented as the one of the earliest settlers in the southern New Jersey region. Several significant archeological sites related to the Lenape still exist along the river corridor in Egg Harbor Township, Mays Landing and Weymouth Township.

Physiographic / Geologic Setting

The Cohansey formation, underlying the Pinelands and the Great Egg Harbor River, is the largest freshwater aquifer in the Mid-Atlantic region of the United States. The water in this shallow aquifer frequently lies near the surface, producing bogs, marshes and swamps.

Surface Hydrology

The Great Egg Harbor River is one of the two major river systems in the Pinelands National Reserve and drains roughly 20 percent of the area's 1.1 million areas. The United States Environmental Protection Agency has designated the river as Outstanding National Resource Waters. This designation provides protection to the river to ensure that there are no changes in water quality.

Flora

The lower Great Egg Harbor River and its tributaries contain vast areas of ecologically significant tidal marshland, swamp pink[2] *(Helonias bullata)* and hardwood swamp. The middle and upper segments of the Great Egg Harbor River and its tributaries contain significant areas of hardwood swamp. Both areas have sites with rare plants or plant communities recognized by federal and state agencies and the Pinelands Commission. These rare plants and plant communities include Pine Barrens Boneset, Parker's Pipewort, Barratt's Sedge and others. The New Jersey Natural Heritage Program documents these species.

Fauna

The Great Egg Harbor River and its tributaries provide breeding habitat for the peregrine falcon as well as wintering habitat and nesting site for the southern bald eagle, both of which are on the federal threatened and/or endangered species list. Hardwood swamps and wetlands are located adjacent to portions of the lower and middle River and its tributaries. These swamps and wetlands provide habitats for several rare and endangered species. The New Jersey Natural Heritage Program documents all of these areas.

Fisheries

The lower tidal portions of the River and its tributaries serve as a critical nursery habitat and spawning grounds for anadromous, resident estuarine, and transient marine fish including alewife herring and striped bass. The lower Great Egg Harbor River is also one of only four areas in the State of New Jersey where commercially important quantities of seed oyster still exist.

[2] Swamp pink is a species of palustrine forested wetlands.

Recreation

The Great Egg Harbor River is the longest navigable river in the New Jersey Pinelands. Its upper and middle reaches are toured by canoeists, while the lower tidal reaches provide sailors and powerboaters with access to the intra-coastal waterway and the ocean. The River and its tributaries, together with related adjacent lands, provide excellent recreational opportunities in close proximity to the major urban centers of Philadelphia, Trenton, Camden and Wilmington.

Atlantic County, which owns and manages over 4,000 acres of public park lands adjacent to the Great Egg Harbor River, has passed an open space bond issue that could significantly increase its ownership and protection of river related resources.

In addition to the nationally significant river resources, the following state and local river-related resources of significance were identified as a part of the protection strategies for the Great Egg Harbor River.

Wetlands

The soils associated with the wetland areas adjacent to the Great Egg Harbor River and its tributaries are classified by the United States Department of Agriculture (USDA) as severely limited for development potential. Please refer to Figure 10-4 - *Flood Prone Areas Map*. These soils have a high content of organic matter, are typically tidal marsh, are continuously saturated, and have low load-bearing capacities.

The USDA has stated that wetland areas are considered extremely valuable as wildlife habitats. The importance of wetlands has been exemplified over the past three decades and led to the enactment of numerous federal, state and local regulations. The Wetlands Act of 1970, Federal Coastal Zone Management Policies, CAFRA, New Jersey Waterfront Development Law, the Tidelands Act of New Jersey and the New Jersey Freshwater Wetlands Protection Act are some examples of the state and federal regulations that were enacted during this time.

Flood Hazard Areas

The 100-year flood hazard areas are mapped for each community by the Federal Emergency Management Agency (FEMA). Figure 10-4 – *Flood Prone Areas Map* depicts these areas for Egg Harbor Township. Municipalities are authorized to regulate stream encroachment activities in these areas under the state Flood Hazard Area Control Act. Municipalities are also responsible for developing regulatory documents such as land use ordinances that manage development and provide protection to these areas.

Sensitive and Archeologically Significant Areas

Areas that are classified as sensitive and archeologically significant are those that are classified as areas located along streams – both permanent and intermittent – where American Indian sites have been documented. Locations where there is a high probability of finding new sites are also classified in this category. There are several areas located within Egg Harbor Township, especially near the Great Egg Harbor River, that are documented sites of early Lenni Lenape Indian settlements and trails.

Summary of Recommendations

Preservation of the Great Egg Harbor River and its tributaries will provide environmental and economic benefits to the residents of Egg Harbor Township, the region, and the entire State. Two recommendations are contained in this report. They are local regulation and public awareness.

Local Regulation

The river, its tributaries, and diverse wildlife make Egg Harbor Township a unique and desirable place to live. In order for the Great Egg Harbor River, its tributaries, and watershed to be given proper protection, the river must be perceived as a most important resource to the community. Egg Harbor Township concludes that the portion of the river located in its boundary must be afforded the greatest protection that can be provided by a local government.

Agencies such as the Pinelands Commission and NJDEP provide protection and guidance for many areas throughout the State including the Great Egg Harbor River. The regulations developed by these agencies are often broad and encompass many areas. Constrained budgets and human resources and a lack of familiarity with specific features and conditions in each of the 566 municipalities in the State create logistical problems with enforcing these regulations. Frequently these agencies rely on the local government to enforce these standards.

Local planning documents such as the master plan and land use ordinances address the concerns and unique circumstances in each municipality. Land use decisions made in each community are based on the local land use regulations or zoning ordinance. In many cases municipalities subject to the jurisdiction of the Pinelands Commission and the NJDEP have incorporated the broad goals, objectives and standards of these other agencies. Egg Harbor Township has done this and is certified by the Pinelands Commission. The Township's regulatory documents also include the standards implemented by NJDEP.

The adoption of this River Management Plan by Egg Harbor Township is an important step in implementing both the national and state goals for the River. The following measures should be taken by the Township to complete this plan.

1) Incorporate the "Goals for River Management" developed in the "*Final Guidelines for Local River Management Plans for the Great Egg Harbor Scenic & Recreation Rivers"* as stated below. Incorporation of these goals into the conservation element of the Township's new Master Plan – will provide the necessary focus on the Great Egg Harbor River as an important community resource, rather than merely a physical boundary.

   a) **Public Awareness.** Increase public education of the value of the Great Egg Harbor River Watershed in association with the Great Egg Harbor River Watershed Association. This association has members from the Township, has conducted various opinion surveys on the River, and works with other municipalities located in the watershed of the river.

   b) **River Management.** Streamline existing regulations and coordinate enforcement efforts with the State. In revising existing regulations the Township must balance the individual rights of the property owners, potential for development in this section of the Township, and protection of the river.

   c) **Land Use.** Maintain patterns of existing land uses and develop criteria for future uses that are compatible with the protection and enhancement of the river.

   d) **Recreation.** Where appropriate increase opportunities for recreational use of the river.

   e) **Resource Protection.** Enhance the natural, cultural, and scenic resources of the river and its watershed and expand their role as part of the regional and global ecosystem.

2) Create a "River Conservation" (RC) overlay-zoning district in the Egg Harbor Township Master Plan. The "RC" district would supplement the existing CRW – Conservation-Recreation-Wetland and the RA – Rural Agriculture zoning districts.

3) Establish a land use plan for the RC district that protects river resources and promotes the Township's goals and objectives. Some possible recommendations for the RC Land Use Plan are indicated below.

   a) Identify permitted, accessory, conditionally permitted and prohibited uses in the RC district. Incompatible uses for this zoning overlay district include – hazardous and toxic waste storage, junkyards, heavy industry, heavy commercial, major groundwater withdrawal, landfills, major airports, impoundments, resource extraction, sand or gravel mining operations, sludge farming.

      i. Encourage uses that respect and enhance the river.

      ii. Prohibit uses that result in detrimental or negative impacts on the river.

iii. Attempt to mitigate unavoidable negative impacts through best management practices, stormwater management techniques, setbacks, vegetative buffers, etc.

b) Adopt design guidelines that include recommendations for the appropriate soil types, use of natural vegetation, and minimizing the visual impacts of development as seen from the River.

c) Adopt additional minimum setbacks for septic systems and structures for each zoning district in the RC district. The setback should be measured from the mean high water line. The minimum setback for septic systems in the CRW zoning district should be 300 feet and for the RA zoning district, 150 feet. These standards should also be applied when existing septic systems are replaced. The minimum building setback should be 150 feet for both the CRW and RA zones.

d) The maximum height of all principal structures in the RC zoning district should be limited to 30 feet. Exceptions to the maximum height limit would include accessory structures necessary for agricultural operations such as barns, silos, water towers, etc.

e) Adopt limits on the amount of lot disturbance or clearing for all lots in the RC district. The recommended maximum percent of lot disturbance in the CRW zoning district is 20% and the recommended maximum percent of lot disturbance in the RA zoning district is 30%. It is recommended that for all lots in the CRW and RA zoning districts where slopes exceed 15%, the maximum percent of lot disturbance permitted should be 10%. Replanting of species should not be considered as a remedy for exceeding these requirements.

f) Adopt additional standards for buffers in each zoning district in the RC district. The buffer should be measured from the mean high water line and should consist of natural vegetation. In the CRW zoning district the minimum buffer width should be 100 feet and in the RA zoning district the minimum buffer width should be 50 feet.

g) All development should be excluded as part of a 50-foot buffer for lots in the RC district. This buffer should be measured from the mean high water line of the river. Expansions or additions to existing development would be prohibited.

h) Additional standards for campgrounds (tents and campers) and recreational vehicle (RV) parks should be developed to limit impacts in RC district. The minimum lot size required for a RV parks should be 10 acres. A maximum of eight campsites per acre would be permitted. All other campgrounds would require a minimum lot size of 5 acres. The maximum number of campsites would be limited to 10 sites per acre.

i) Most of the undeveloped areas in the watershed of the river have become prized for their scenic value. Intensive-use recreation facilities should be specifically prohibited from these areas in RC district.

j) Regulations for docks and bulkheads should be incorporated to address immediate and cumulative impacts on the river. Currently the Army Corps of Engineers limits their review of proposed docks to the impact on navigation within the channel. The Township would like to be included as part of the review process by the NJDEP and Army Corps of Engineers for any application for Water Resource Permits affecting the Great Egg Harbor River corridor.

   Additional criteria should be incorporated to review applications for visual impacts and potential impacts on water quality and non-motorized watercraft. The size and length of these structures should be limited to the maximum extent possible. This is especially necessary in areas designated as "scenic."

k) Continuing education programs and workshops can be conducted at local colleges. Programs discussing the NJDEP Best Management Practices Manual, water conservation, and freshwater wetlands should be offered to residents, developers, municipal engineers, public works officials, etc. County agricultural agents can provide information to farmers and residents concerning BMPs, fertilizers, and pesticides.

l) The Township should adopt "Best Management Practices" (BMPs) established by the State Agricultural Development Committee (SADC). The BMPs established by the SADC prohibit certain practices, maintenance procedures, and other management practices that contribute to non-point source pollution.

m) Erosion and sediment control measures that stabilize or reduce the loss of topsoil should be implemented. Specific guidelines for soil erosion and sediment control are listed in Appendix 4.

n) The environmental and aesthetic values of "upland habitats" may not be readily apparent and these areas are frequently overlooked as a natural resource when located in close proximity to a prominent water body. This proposed River Management Plan has evaluated the areas of upland habitats contained in the proposed RC district. The boundaries of the proposed RC district were delineated to include sufficient area for protecting the areas of upland habitats in this portion of the Township from extensive development.

o) Establish a Transfer of Development Rights (TDR) program. A TDR program allows property owners to transfer the right to develop from a particular piece of property to another parcel. This program minimizes development in inappropriate areas (wetlands and other environmentally sensitive sites), allows increased development in more suitable places, and provides a means of compensation to the property owner that have resigned the right to further develop the property. Enacting a TDR program in the proposed River Management Area would permit landowners along the river to be properly compensated for promising not to develop the land while retaining all other rights to use the land.

p) Create a Mitigation Bank. This program targets specific areas in a community or region for wetlands restoration. Development is permitted in less sensitive or compromised wetlands if "credits" are purchased from the "Bank." Typically a cost per acre will be assessed to the developer for each acre disturbed. The funds generated through the sale of mitigation credits is used to create artificial wetlands in the areas targeted for restoration.

q) Public acquisition of lands located along the river has proven to be one of the most effective ways to protect the riverfront. Public ownership ensures access to the general public and that the riverfront will be properly maintained and preserved. While expensive, there are several different options with different associated costs. These options include fee simple acquisition, tax deductible donations of lands, life estate transfers, lease with buyout options, purchase and leaseback (with restrictions) and installment purchase.

r) Conservation easements allow the landowner to continue to use their property, gain an equitable return for the deed restriction of the property and preserve environmentally sensitive areas. Easements are typically a cost-effective method of insuring protection.

Public Awareness

Public Awareness and education about the river are critical to the success of the River Management Plan. Increased awareness of the value of the natural resources located in the watershed of the Great Egg Harbor River is essential in insuring the future of this river.

1) **Educational programs in local schools.** A number of environmental educational programs are offered through the Atlantic County Division of Parks and Recreation. An environmental group – the Atlantic County Naturalists – has expressed an interest in supporting conservation efforts for the river.

2) **Establish a panel of speakers.** A list of available speakers who are knowledgeable about the River and the proposed River Management Plan should be compiled. This list should be circulated throughout the Township and County. Speakers would be invited to make presentations at various local clubs and civic organizations.

3) **Use of multimedia.** Press releases for the proposed Management Plan should be prepared for local and regional newspapers and appropriate journals. Use of the local television and radio stations should be utilized to generate general public interest. A website could be created to provide information on the river and "linked" to the municipal and other agency websites to provide quick information and updates.

4) **Invite archaeological exploration of the River's watershed areas.** Universities that offer archeological or local history curricula should be invited to the Township. This would provide opportunities to increase the historical significance of the river.

Community Impact

The purpose of designating the Great Egg Harbor River Watershed as Scenic and Recreational River was to protect the numerous resources contained in and around the river. This action was in part, a response to the local desire to conserve important and valuable natural resources.

Wetlands located in the watershed of the river possess inherent qualities that regulate the ecological balance of the environment. Our wildlife is dependent on wetlands for protection and nourishment. Recreational activities such as fishing, waterfowl hunting, boating, and wildlife observation also depend on healthy wetlands and open water habitats. The river, its tributaries, and associated wetlands provide open space, scenic resources, educational and research opportunities, and historical/ archaeological value to the people living in this region.

Egg Harbor Township is located in the jurisdiction of the Pinelands Comprehensive Management Plan and CAFRA. These two agencies have enacted strict development regulations. The Township's land use ordinance is subject to these rigorous standards. It is certified by the Pinelands Commission and complies with the intent of the CAFRA regulations. The Township already employs several preservation and conservation techniques to preserve their natural resources. The short-term benefit (one to five years) of enacting the proposed River Management Plan will be to supplement the existing standards and programs by increasing buffers, limiting incompatible development, and reducing non-point source pollution. This will provide a concentrated protection effort for the river in a critical location and may eventually lead to improvements in the water quality and preservation of viable wetland reserves.

Future Actions

1) The Planning Board of Egg Harbor Township should adopt the goals of this River Management Plan in conjunction with the conservation element of the Master Plan. These recommendations should be forwarded to the Governing Body for review and possible amendments to Chapter 225 of the Township Code in order to establish the River Conservation (RC) Zone.

2) The Governing Body should encourage interested residents to create an association that would assist in educating the public on the importance of preserving the Great Egg Harbor River, its tributaries and watershed.

3) The Governing Body should continue to review policies related to surface water quality testing for runoff from golf courses and continue existing programs in place.

Current Zoning based on § 225-7 from the Code of the Township of Egg Harbor.

Requirements	CRW	RA
Minimum Lot Size	5 ACRES	2.3 ACRES
Minimum Lot Width	125 FT	125 FT
Minimum Required Yard Depths		
Front Yard	50 FT	50 FT
Rear Yard	100 FT	100 FT
Side Yard	20 FT	20 FT
Accessory Structure		
Rear Yard		10 FT
Side Yard		10 FT
Maximum Building Height		
Principle	30 FT	30 FT
Accessory	15 FT	15 FT
Maximum Impervious Coverage	5 %	5 %

Proposed Recommendations for the RC- River Conservation Zone:

Requirements	RC – River Conservation Zone	
	CRW Overlay	RA Overlay
Width of Vegetative Buffer	50 FT	50 FT
Setback from the River for Structures	150 FT	150 FT
Setback from the River for Septic System	300 FT	150 FT
Minimum River Frontage	125 FT	125 FT
Maximum Clearing of Vegetation	20 %	30%

Regulated Land Uses

Egg Harbor Township

The Proposed River Management Area for the Great Egg Harbor River is located in two zoning districts in Egg Harbor Township, the CRW and the RA. Figures 7-2 (existing) and 12-1 (proposed) – "Zoning Map" show the boundaries of these zoning districts in the Township.

- CRW Conservation - Recreation - Wetland District – Over one-half of the land in the proposed River Management Area in Egg Harbor Township is located in the CRW zone. The minimum required lot size in the CRW zoning district is 5 acres. The standards for this zoning district are compatible with the recommendations set forth in the *River Management Plan Guidelines.*

- RA Rural Agriculture District – Some of the rivers tributaries stretch into the RA district, allowing for the same uses as the CRW district. The RA zoning district requires that the minimum lot size is 2.3 acres.

Uses in the CRW and RA Zoning Districts			
	Permitted Principal Use	Permitted Accessory Use	Conditional Use
Farming and agricultural operations	**X**		
Single-family dwellings	**X**		
Places of worship	**X**		
Golf Courses	**X**		
Stables and horse farms	**X**		
Private Schools	**X**		
Museums	**X**		
Nonprofit clubs	**X**		
Fraternal organizations	**X**		
Volunteer fire companies	**X**		
Rescue and first aid squads	**X**		
Roadside stands		**X**	
Professional home offices		**X**	
Private Garages		**X**	
Marinas			**X**

The following uses and activities are specifically prohibited in all zoning districts in the Township:

A. Storing bulk oil or gasoline above the ground as the primary use.

B. Selling used lumber, building materials and defunct motor vehicles or parts; or storing used lumber and building materials.

C. Junkyards, automobile wrecking yards or disassembly yards or the sorting or baling of scrap metal, paper, and rags.

D. Any use which emits excessive or objectionable amounts of dust, fumes, noise, odor, smoke, vibration or waste products.

E. Gravel pits or sand mines.

F. Dismantling of motor vehicles and/or machinery by burning.

G. Piggeries or the business of raising pigs.

H. The manufacturing of explosives, volatile chemicals or any uses which would produce a similar hazard or nuisance.

Appendix 2

Rare Species and Natural Communities Present

Egg Harbor Township

Legend for the New Jersey Heritage Database
Rare Species and Natural Communities Present

Federal Status Code
LT – Taxa formally listed as threatened
E (S/A) – Endangered Similarity of appearance species

State Status Codes
E – (Endangered species) An endangered species is one whose prospects for survival within the state are in immediate danger due to one or many factors – a loss of habitat, over exploitation, predation, competition, and disease. An endangered species requires immediate assistance or extinction will probably follow.
T – (Threatened species) A species that may become endangered if conditions surrounding the species begins to or continues to deteriorate.
D – (Declining species) A species which has exhibited a continued decline in population numbers over the years.
S – (Stable species) A species whose population is not undergoing any long-term increase/decrease within its natural cycle.
U – (Undetermined species) A species about which there is not enough information available to determine the status.
Note: Status for animals separated by a slash (/) indicates a dual status. First status refers to the state breeding population, and the second status refers to the migratory or winter population.

Global Element Rank
G2 – Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
G3 – Either very rare, and local throughout its range, or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single eastern state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; with the number of occurrences in the range of 21 to 100.
G4 – Apparently secure globally; although it may be quite rare in parts of its range, especially at the periphery.
G5 – Demonstrably secure globally; although it may be quite rare in parts of its range, especially at the periphery.

The New Jersey Natural Heritage Database

Rare Species and Natural Communities Present

Common Name	Federal	State	Global Rank
Pink Tickseed			**G3**
Pine Barren Smoke Grass			**G3**
Chickasaw Plum		**E**	**G5**

Atlantic County Division of Parks (Naturalists)
Rare Species and Natural Communities Present

Common Name	Federal	State	Global Rank
Curly Grass Fern			**G3**
Cranefly Orchid			**G4**

The New Jersey Natural Heritage Database

Rare Species and Natural Communities Present

Common Name	Federal	State	Global Rank
Red Headed Woodpecker		**T/T**	**G5**
Barred Owl		**T/T**	**G5**

Atlantic County Division of Parks

Rare Species and Natural Communities Present

Common Name	Federal	State	Global Rank
Cooper's Hawk		**E**	**G3**
Common Tern		**D/S**	
Forster's Tern		**Inc**	
Great Blue Heron		**T/S**	**G3**
Glossy Ibis		**D/S**	
Northern Pine Snake		**T**	
Osprey		**T**	
Black – Crowned Night - Heron		**T**	
Yellow – Crowned Night - Heron		**T**	
Black Rail		**T**	
Pine Barrens Treefrog		**E**	
Bald Eagle	**LTNL**	**E**	
Peregrine Falcon	**E**	**E**	
Corn Snake		**E**	
Snowy Egret		**S**	
Little Blue Heron		**T/S**	
Great Egret		**S**	
Northern Harrier		**E/U**	**G3**

Appendix 3

Model Zoning Ordinance

Egg Harbor Township

The following standards are developed as part of the River Conservation Zone (RC) overlay-zoning district. The boundaries of this zoning district are delineated on the "Zoning Map of the Township of Egg Harbor."

I. Purpose and Intent

The specific purpose and intent of this Article is to provide for the protection of the natural resources of the Great Egg Harbor Scenic and Recreational River and its tributaries while providing regulations for future development of the adjacent area.

In October 1992, President Bush signed legislation authorizing the designation of 129 miles of the Great Egg Harbor River and its tributaries ("the River") into the National Wild and Scenic Rivers System. A comprehensive management plan and an environmental impact statement for the River were prepared for the National Park Service in 1999. This plan is entitled *Guidelines for Local River Management Plans for the Great Egg Harbor National Scenic and Recreational River and Its Tributaries* ("Guidelines") and provides clear goals, objectives, and guidance for the future development within the watershed of the River. The River Conservation Zone ("RC") has been established to provide the land use controls necessary to implement the Guidelines.

A. Purposes

1. Protect the health, safety and welfare of the residents located within the River corridor.

2. Protect and enhance the valuable natural resources found in the RC zoning district.

3. Protect and encourage existing land uses within the RC zoning district.

4. Identify uses and conditional uses that are consistent with the intent of this Article, as well as uses that are inconsistent with this Article.

5. Identify specific development and site design standards for the RC zoning district.

6. Enhance regional management of the river through local land use controls.

B. The RC zoning district is designed as an overlay zoning district that imposes additional development requirements that supplement the requirements of the underlying zoning districts. Any development standards not expressly governed in the RC zoning

district shall be subject to the standards of the underlying zoning district. The standards established for minimum lot sizes, building setbacks, permitted uses, densities, and open space in the RC zoning district shall take precedence over the standards of the underlying zoning district.

II. Limitations

This Article shall apply only to activities on lands contained in the boundaries of the River and its watershed, as designated in the Guidelines and Figure 10-9, the "Recommended Management Boundaries Map". Nothing contained herein shall limit the individual rights of landowners to maintain lawfully established structures or uses.

III. Non-Conforming Uses

Existing uses that do not meet the standards specified in this Article shall be considered as "non-conforming" and shall be permitted to continue in their present form.

IV. Permitted Uses

Any use identified in this Article as a permitted use is permitted within the RC district, subject to the restrictions of the RC district and the underlying zoning district. The following uses are permitted in the RC district:

A. Principal uses:

1. Farming and agricultural operations.
2. Single-family dwellings.
3. Churches and places of worship.
4. Golf courses.
5. Stables and horse farms.
6. Private schools, museums, nonprofit clubs, fraternal organizations, and volunteer independent fire companies.
7. Parks.
8. Campgrounds.
9. Public utilities.
10. Conservation activities.
11. Fish and wildlife management.
12. Low-intensity recreation (fishing, canoeing, bird watching, etc.).

B. Accessory uses:

1. Uses customary and incidental to the principal uses.

2. Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located a minimum of 30 feet from the street line.
3. Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes.
4. Private garages, as an accessory building to a single-family dwelling.
5. Cellular and telecommunications towers as an accessory use to a volunteer independent fire company.
6. Docks, as an accessory use to single family dwellings.

C. Conditionally permitted uses – The following conditional uses may be permitted within the RC district if they are also permitted in the underlying zoning district:

Marinas, piers, and bulkheads (Marinas are subject to the conditions and development regulations of the MC district.)

V. Prohibited Uses

All uses identified in this Article as prohibited uses in the RC district are expressly forbidden. In addition, all uses not expressly permitted as a principal, accessory, or conditionally permitted use are also prohibited.

A. The following uses are expressly prohibited:

1. Hazardous and toxic waste storage.
2. Junkyards.
3. Heavy industry.
4. Heavy commercial.
5. Major groundwater withdrawal.
6. Landfills.
7. Major airports.
8. Impoundments.
9. Resource extraction.
10. Sand and/or gravel mining operations.
11. Sludge farming.

VI. District Regulations

Within the RC district the following standards shall apply. These standards are in addition to the regulations of the existing, underlying zoning districts.

A. Design Guidelines. Proposed development in the RC district shall meet the following applicable design guidelines:

1. Lots shall be laid out, to the greatest extent feasible, to achieve the following objectives:

   a. Location of structures and improvements shall be in areas that are suitable for development and have soils types appropriate for the installation of septic disposal beds, where no public sewer infrastructure is available.

   b. Structures shall be situated to maximize natural vegetation and buffers for energy conservation and screening. Clearing within these areas should be minimized and not exceed the limits of disturbance imposed by this Article.

   c. Structures and improvements shall be located in a manner that will minimize any impacts on the viewshed from the River.

   d. Comply with other regulations that govern the protection of the public health, safety, and welfare that are contained in Chapter 94 – Design & Performance Standards and Chapter 198 – Subdivision and Site Plan Review of the Township Code.

B. Minimum Criteria. The following minimum standards shall apply within the RC district for all permitted, accessory and conditional uses.

1. Minimum lot size shall be five (5) acres for the CRW zone and 2.3 acres for the RA zone.

2. Minimum lot frontage that is required for all lots having direct access to the River shall be 125 feet.

3. The minimum setbacks required for all structures shall be 150 feet. The minimum setback for septic disposal systems and drainage basins shall be 300 feet for the CRW zone and 150 feet for the RA zone. The setback shall be measured from the mean high water line.

4. Maximum building height permitted is 30 feet. Accessory structures necessary for agricultural operations such as barns, silos, and water towers will be exempt from this provision.

5. Maximum impervious coverage permitted for any lot shall be 5%.

6. Lot Disturbance.

   a. Lot disturbance is defined as clearing, cutting, grading, excavating, filling, transporting, or any other activity that alters or eliminates existing areas.

   b. All lots shall be limited to a maximum amount of site clearing of 20% in the CRW zoning district and 30% in the RA zoning district. In areas where slopes exceed 15%, the maximum amount of site clearing permitted is limited to 10% in both the CRW and RA zoning districts.

   c. For areas where lot disturbance in excess of the maximum amount permitted by the Article has occurred, replanting with ornamental species shall not constitute adequate mitigation.

7. Buffers.

   a. A vegetative buffer of no less than 50 feet in width, as measured from the mean high water line, shall be maintained on all lots. This buffer shall be composed of indigenous species. An opening of no more than 10 feet may be excluded from the buffer requirements to provide pedestrian access to the River.

   b. All development shall be excluded from this 50-foot buffer. No expansions or additions to existing structures within this buffer area shall be permitted.

C. Recreation Areas.

1. Minimum Lot Size.

   a. Campgrounds limited to use by recreational vehicles (RVs) – 10 acres.
   b. All other campgrounds – 5 acres.

2. Density.

   a. Campgrounds limited to use by recreational vehicles (RVs) – 8 sites per acre.
   b. All other campgrounds – 10 sites per acre.

3. Intensive use recreation facilities in scenic areas shall be prohibited.

D. Docks – Where permitted as an accessory use to a single family residential dwelling unit, docks shall be limited to a maximum of 30 feet in length, or the maximum required to

allow access to 3 feet of water depth at low tide. This maximum length shall include all structures associated with the dock - ramps, floating platforms and fixed docks.

VII. Exceptions, Variances, and Appeals

Exceptions, variances, and appeals to the provisions of this Article are subject to the following conditions:

A. An applicant may request that a property be declared exempt from the requirements of the RC district. The applicant must supply a certified survey of the property in question, in accordance with N.J.A.C. 46:23. The property shall be exempt from the provisions of the RC zoning district if it is determined that the property was not located entirely within the boundaries of the RC overlay-zoning district as of the date of enactment of this Ordinance.

B. Variances requested from the requirements of the RC district shall be subject to the standards contained in N.J.S.A. 40:55D-70 of the Municipal Land Use Law, Chapter 291, Laws of N.J. 1975.

C. Appeals for any decision rendered by the Planning Board or Zoning Board of Adjustment of the Township of Egg Harbor shall be subject to the requirements contained in N.J.S.A. 40:55D-17 of the Municipal Land Use Law, Chapter 291, Laws of N.J. 1975.

Appendix 4

Guidelines for Soil – Erosion
and Sediment Control

Egg Harbor Township

Effective soil erosion and sediment control planning requires careful evaluation of the following factors prior to developing plans for specific sites. The key planning objective is to retain soil on the site and minimize runoff of sediment:

I. Factors to be considered in planning for soil erosion and sediment control:

a. Erosion characteristics for type of soils found on-site. Specific information on soil characteristics is found in the County Soil Survey that is prepared by the U.S.D.A.
b. Existing drainage patterns.
c. Presence of steep slopes, stream corridors, wetlands, wetlands buffers, etc.
d. Type of existing vegetation that will remain through construction and ability of vegetation to buffer site during construction.
e. Minimum size of area to be cleared.
f. Use of a stabilized construction entrance during construction.
g. Protection of conduit outlets with riprap.
h. Stabilization of excess excavated materials that will be removed from site.

When considering offsite impacts of a proposed project, stability of soils at points of discharge must be demonstrated through stormwater analysis for 2- and 10-year storms. If existing offsite conditions are currently unstable, it must be demonstrated that the project will not aggravate these conditions. If infiltration basins are proposed for stormwater management, a stable emergency discharge area must be provided.

II. Factors to be considered in the design of erosion control plans –

a. Existing and proposed grades, maximum slope, and maximum area to be disturbed, based on:

1. Erosion characteristics of soils.
2. Geology.
3. Rainfall data.
4. Proposed type and location vegetation.

b. Construction sequence and installation of erosion controls including:

1. Site clearing.
2. Stripping of topsoil.
3. Implementation of devices such as silt fences, inlet protection, etc.

4. Sequence of construction.
5. Maintenance of erosion controls throughout construction.

c. Soil erosion controls should be designed to achieve the following:

1. Interception of runoff from long and/ or steep slopes and delivery of runoff to stable areas.
2. Temporary vegetation is used for stabilization.
3. Existing buffer strips are to be preserved and used for sediment filtration.
4. Stabilizing soil stockpiles.
5. Soil loss is controlled at the following locations:

i. Driveway entrances/exists.
ii. Streams, rivers, natural drainage channels.
iii. Large, cleared areas subject to wind erosion

III. Factors to be considered during construction:

a. Implementation of erosion control plans.
b. Adhering to proposed construction sequence.
c. Frequent inspection and maintenance of erosion control devices.
d. Timely removal of sediment from basins, time when temporary structural controls will be removed, and the installation of permanent vegetation upon project completion.

Chapter 11: Recreation / Open Space Element

A. INTRODUCTION

In 1993, the Township adopted an Open Space and Recreation Plan. This plan included the unique and natural resources in the Township; a list of goals, objectives, and assumptions for open space and recreational needs within the Township; an inventory of existing and proposed municipal parks and recreation areas; municipal recreational amenities; county parks and open space; a description of the National Wild and Scenic Rivers system; and a recommendation and implementation strategy. This Recreation Plan Element includes relevant portions from the 1993 Open Space and Recreation Plan, revisions that account for changes in planned improvements or existing facilities, and a "needs assessment" based on current recreation trends and population projections for the Township.

In New Jersey most of the recreation facilities are traditionally provided by county and municipal agencies. The responsibility for acquiring, developing, and maintaining regional parks recreation areas are typically handled by the County government. Neighborhood and local recreational facilities are often planned, constructed and maintained by the municipality.

A majority of local governing bodies in New Jersey have used grants and funding made available through the NJDEP Green Acres Program to acquire parks and open space since 1961. The Green Acres program matches local contributions and provides fifty percent (50%) of the funding for purchases. Local park development was primarily funded through the Land and Water Conservation Fund of 1965, a federal program.

In 1974 the Green Acres program was revised. One of the most significant changes permitted bond money to be used for the development of local recreation facilities. Urban counties and municipalities are now able to combine funding from Green Acres and the Land and Water Funds programs to finance up to ninety percent (90%) of the cost of a development project.

In November 1998 the residents of New Jersey overwhelmingly approved a dedicated open space tax to provide a trust fund for the purposes of open space preservation. Programs that receive funding include historic preservation projects, farmland acquisition, general open space preservation, and park development. This effort is part of a campaign by the Governor to preserve one million (1,000,000) acres of land throughout New Jersey. More than $90 million was allocated by the New Jersey Legislature in the 2000 fiscal year budget for these preservation projects.

Municipalities are also permitted to set aside portions of their land to accommodate recreational uses or open space, as authorized in the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq. Egg Harbor Township has exercised this option and designated one area in the Township as "Recreation Park". This zoning district is approximately 190

acres and is located to the southeast of the intersection of Zion Road and Ocean Heights Avenue. Only golf courses, commercial recreation uses, municipal parks, playgrounds and municipal buildings are permitted in this zoning district.

In 2001, Township voters passed a referendum to create a tax rate in the amount of $0.02 per $100 of assess property value for an open space fund that will be used for preservation, acquisition, recreational development, and capital maintenance of land dedicated to open space use. The open space fund may only be used for purposes which benefit the public and will be administered by the Township Committee.

B. INVENTORY OF EXISTING RECREATION FACILITIES

1. Atlantic County

The Atlantic County Open Space and Recreation Plan (October 2000) was reviewed during the preparation of this Recreation / Open Space Element to ensure that the Township and County share a common vision for present and future recreation needs within the Township.

As stated previously, New Jersey approved a dedicated source of funding for open space preservation and park development. Atlantic County has acquired approximately 1,200 acres of land in Egg Harbor Township (Table 11-1) using this funding. Existing recreation facilities in Egg Harbor Township are shown in Figure 11-1.

Table 11-1
County Land in Egg Harbor Township
Acquired through Dedicated Open Space Tax

Site	Acres
Powell Creek	124
River Bend Park	650
Interdevelco	25
Greentree Golf Course	241
Nathanson Property	157
	1197

Source: *Atlantic County* ***Open Space and Recreation Plan***, October, 2000.

In addition to the above properties, the County also owns two (2) other recreation / open space sites in the Township. The County has retained portions of the old wooden bridge on Somers Point-Longport Boulevard for use as a fishing pier and has constructed a boat access ramp along the northern side of the bridge abutment. The County is also planning to convert the abandoned Western Seashore Line along the West Jersey Avenue into a bike trail. Phase I of this project includes the area between the Shore Mall and the Hamilton Township border.

2. Municipal Facilities

Egg Harbor Township has its own Department of Parks and Recreation. The Parks and Recreation Department sponsors activities such as soccer, fencing, dance, football, flag football, tennis, karate, basketball, arts and crafts, street hockey, wrestling, swimming, and aquatics. The Township owns thirteen (13) facilities throughout the Township including Veteran's Memorial Park, Childs-Kirk Memorial Park, Delilah Oaks Park, M.K. Betterment Park, Oakland/Tremont Park, the Cygnus Creative Arts Center, the Environmental Learning Center, Tony Canale Park, Shires Park, Ridge Avenue Ready-to-Ride Facility, Tilton Road Center, Temple Tract, and Castle Park, as indicated in Figure 11-1. The amenities contained at each location are listed below in Table 11-2.

Table 11-2
Recreational Amenities at Parks throughout the Township
Egg Harbor Township, Atlantic County, New Jersey

Park Site	Softball/Baseball Fields	Little League Fields	Soccer Fields	Paddle Tennis Courts	Field Hockey Fields	Basketball Courts	Volleyball Courts	Football Fields	Tennis Courts	Trails	Swimming Pools	Running Track (¼ Mile)	Multipurpose Fields	Playground	Passive Parks
Veterans Memorial Park	11	1[1]			3[2]			1	2	1[3]					
Childs-Kirk Memorial Park	4		2											1	
Delilah Oaks Park						1			1			1[4]	1	1	
M.K. Betterment Park						1	1							1	
Oakland/Tremont Park						1									
Environmental Learning Ctr.															1
Tony Canale Park	1						4		2	1			2	1	
Shires Park	1					1							1	1	
Ridge Ave. Ready-to-Ride										1					
Tilton Road Center															
Temple Tract															1
Castle Park														1	
Total	***17***	***1***	***2***		***3***	***4***	***5***		***5***	***3***		***1***	***4***	***6***	***2***

[1] Babe Ruth League
[2] Street Hockey
[3] BMX Bike Trail
[4] Exercise Track

As evidenced in Table 11-2, the municipal parks throughout the Township have the ability to offer a variety of recreational programs and activities to residents of all ages. The three (3) major municipal recreation centers in the Township are Veterans Memorial Park, Childs-Kirk Memorial Park and Tony Canale Park. These sites include a refreshment stand (Veterans Park) a field house / bathroom facilities (Childs-Kirk Park), and an outdoor amphitheater / bathroom facilities (Canale Park).

Additional recreation and community service facilities can be found at the John Couchoud Community Center. This community center is located on a 9.5-acre site on English Creek Avenue. It is used as a meeting place for various civic groups, as a nutrition site by the Atlantic County Department of Human Services, and by the Township Recreation Department for different programs and activities. Other recreational amenities include a bocce ball court, miniature golf course, horseshoe pit and picnic area.

The Township has also initiated development of an Environmental Learning Center (ELC). This 13.6-acre site is located on School House Lane. The Township had previously used this site as a gravel pit. Since the ELC has been established litter has been removed from the site and a field laboratory for the study of successional re-vegetation has been established.

The Egg Harbor Township Police Athletic League (PAL) operates several of the municipal facilities as indicated below:

> **M.K. Betterment** – PAL purchased the M.K. Betterment Association in 2001. Work is ongoing to refurbish the building and restore the youth related activities at the site. It is anticipated that the EHT PAL will partner with the Township in 2002 in order to continue youth programs at the facility.
>
> **Ridge Avenue** (Block 1305, Lots 2, 3, 4, 27 and 33) – PAL operates its Ready-to-Ride program on the site of an abandoned gravel pit. The site includes trails utilized for motorcycles and ATVs along with a training / community center.
>
> **Tilton Road Center** (Block 1129, Lots 31 & 32) – PAL operates a community center out of a building previously used by the Sixth District Rescue Squad. The facility is used for meeting space, dance programs, and motorcycle/ATV training.

The Temple tract is an approximately 152-acre site located off of Zion Road. This parcel was purchased in 2001 with the assistance of the Green Acres Program and Atlantic County and will be used for passive recreation.

The Egg Harbor Township Community Playground, Inc., was a non-profit group that was organized in 1992 to develop a community playground. This group designed and constructed a playground - Castle Park - adjacent to Veterans Memorial Park off of Ocean Heights Avenue. This playground is unique not only because of its design, but also because of the sense of community fostered in the volunteers involved in this planning effort.

3. Egg Harbor Township Board of Education

NJDEP issued a report entitled *Outdoor Recreation Plan of New Jersey* (Outdoor Recreation Plan) in November 1984. The Outdoor Recreation Plan stated that the

public school districts in New Jersey controlled over 12,000 acres of recreation land and facilities. Most of the stadiums, gymnasiums, and running tracks; many of the ball fields, outdoor basketball courts, and tennis courts; and some of the nature centers, picnic areas, pools and trails contained in these lands were owned by the public school systems.

Schools provide the only public recreation available to residents in some municipalities. Policies for public access to these facilities vary with each individual school board. NJDEP's policy on public access to these educational recreation facilities is very clear. This agency encourages the construction of recreation facilities adjacent to schools and awards Green Acres grants to municipalities who develop "joint-use" or multi-use facilities providing they will be available to the general public on a daily basis.

As previously noted, the Egg Harbor Township Board of Education (EHTBOE) plays a significant role in providing open space and recreation opportunities in the community. The Township currently has six (6) public schools - one (1) high school, one (1) junior high school, one (1) intermediate school (grades 4 through 6), and three (3) elementary schools. Table 11-3 lists each public school in the Township, the amount of land at each school, and the recreational amenities at each school.

Table 11-3
Recreational Amenities at Public Schools throughout the Township
Egg Harbor Township, Atlantic County, New Jersey

School Location	Area (Acres)	Softball/Baseball Fields	Little League Fields	Soccer Fields	Paddle Tennis Courts	Field Hockey Fields	Basketball Courts	Volleyball Courts	Football Fields	Tennis Courts	Trails	Swimming Pools	Running Track (¼ Mile)	Multipurpose Fields	Playground
EHT High School	76	3		1		1			1	5		1	1		
EHT Middle School	29	2		1			3			8					
EHT Intermediate School	44	2					2							1	
Davenport School	23	1												1	1
Slaybaugh School	51	2		1			3								1
Swift School	52	1												1	
Total	***275***	***11***		***3***		***1***	***8***		***1***	***13***		***1***	***1***	***3***	***2***

4. Other Facilities

Cygnus Creative Arts Centre - The Cygnus Creative Arts Centre is a 5.4-acre site that is located on English Creek Avenue, adjacent to the John Couchoud Civic

Center. This site is the former location of McKee City School No. 6. It is operated by a not-for-profit agency.

Private Developers - Private developers also play an important role in providing recreational facilities throughout the Township. Commercial recreation facilities available in the Township include:

- **King Pin Lanes** - Bowling alley and ice hockey rink, located on the Black Horse Pike in the Cardiff section of the Township.
- **Golf and Tennis World** - Racquetball / tennis courts and driving range, located on the Black Horse Pike in West Atlantic City.
- **Tilton Athletic Club** – Multipurpose fitness center located on Tilton Road and Hingston Avenue.
- **Parkway Skating Center** - A 24,000 square feet roller skating rink, located on Fire Road.
- **Storybook Land** – 20-acre amusement park, located on the Black Horse Pike.
- **Harbor Pines Golf Club** - An 18 hole golf course, located on Ocean Heights Avenue and Steelmanville Road.
- **Egg Harbor River Resort Campground** - Approximately 33 acres with 124 campsites and hook-ups available for water, electric, and television, located on Thompson Lane.
- **Colonial Meadows Campground** - Approximately 55-acre site, located on Mays Landing-Somers Point Road and Lees Lane.
- **Sleepy Hollow Campground** - Approximately 30-acre site, located just north of Bevis Mill Road.
- **Bob Thatcher's Family Golf** – A driving range and a pitch and putt golf course that opened in 2002.
- **Ballamor Golf Club** – Private 18 hole golf course that opened in 2001 located just southwest of the intersection of English Creek Avenue and Ocean Heights Avenue.
- **Twisted Dune** – Public 18 hole golf course that opened in 2001 located on Ocean Heights Avenue between Swift Drive and Barnett Avenue.

C. NEEDS ANALYSIS BASED ON CURRENT POPULATION AND POPULATION PROJECTIONS

The interaction of recreational supply and demand defines the open space and recreation needs of an area and individual municipalities in the area. The demand for outdoor recreation is influenced by many factors including population growth and socio-economic characteristics. Residents and visitors typically desire a diverse selection of recreational opportunities ranging from active sports - hiking and bicycling - to passive recreation and open space opportunities such as camping and horseback riding.

The magnitude and diversity of a municipality's recreation demand can present a challenge to those involved in providing recreation amenities or planning for future facilities. The industry standard among planners and recreation authorities for recreation areas is listed in Table 11-4, which includes the recommended and actual numbers of individual recreation amenities.

As noted in Table 11-4, the Township appears to have a current and projected deficiency in the following recreational facilities:

- Volleyball courts – current deficiency five (5) courts, four (4) courts projected.
- Swimming pools - one (1) pool for both current and projected population.
- Community centers – current deficiency one (1) center, two (2) centers projected.
- Ice arenas – one (1) area for both current and projected population.

The Township has five (5) existing multi-purpose fields, with two (2) additional fields proposed as part of the Tony Canale Park. These multi-purpose fields are used for a variety of activities including soccer, softball, baseball, little league, field hockey and football. Based on the large number of existing and proposed multi-purpose fields, it can be assumed that the deficiency for little league fields is actually eliminated.

Table 11-4
General Standards for Recreational Facilities
Based on 2000 Population and 2010 Population Projections
Egg Harbor Township, Atlantic County, New Jersey

Recreational Amenity	National Recreation and Park Standard	2000			2010		
		Facilities in Twp.	Min. No.	Surplus/ Shortage	Facilities in Twp.	Min. No.	Surplus/ Shortage
Softball Fields	1/5,000 residents	26	6	14	27	7	13
Baseball Fields	1/5,000 residents		6			7	
Soccer Fields	1/10,000 residents	5	3	2	5	4	1
Field Hockey Fields	1/20,000 residents	4	2	2	4	2	2
Multi-Purpose Fields	No standards published	4	---	4	6	---	6
Basketball Courts	1/5,000 residents	11	6	5	11	7	4
Volleyball Courts	1/5,000 residents	1	6	(5)	3	7	(4)
Football Fields	1/20,000 residents	2	2	---	2	2	---
Tennis Courts	1/2,000 residents	16	15	1	20	18	2
Trails	1 system per region	1	1	---	1	1	1
Swimming Pools	1/20,000 residents	1	2	(1)	1	2	(1)
Running Track (¼ Mile)	1/20,000 residents	2	2	---	2	2	---
Community Centers	1/25,000 residents	0	1	(1)	0	2	(2)
Ice Arena	1/20,000 residents*	1	2	(1)	1	2	(1)
Outdoor Theater	1 per region*	---	1	(1)	1	1	---
Camping Areas	1 ac. /5,000 residents*	243 ac.	6 ac.	237 ac.	243 ac.	7 ac.	236 ac.
Regulation Golf Courses	1/50,000 residents*	3	1	2	7	1	6

Source: "The New Illustrated Book of Development Definitions," (1997) page 219.
+ Includes proposed community center as part of the Police Athletic Center (PAL) expansion.
* ***Source:*** "Planning Design Criteria," (1969) pages 224-225

D. FUTURE ACQUISITIONS / PLANNED IMPROVEMENTS

1. Atlantic County

In addition to the sites currently owned and operated by the County, several other candidate sites in the Township have been identified for future acquisition. These sites include Malibu Beach, Central North Park, Central South Park, Bikeway East, the Egg Harbor / Northfield Mini Park, the Tony Canale Park Expansion, South Park, the DeCarlo Tract, and the Water Park at the Federal Aviation Administration facility.

Each of these sites is prioritized in the County's Open Space and Recreation Plan. There are four (4) different priority levels. Level 1 Priority indicates that the site is presently under development pressure and is in a "high risk" area in terms of being lost for open space and preservation considerations. Level 2 Priority delineates sites that are under consideration for use as an educational, historical, and / or cultural resource site. Living farms are typical examples of Level 2 Priority sites. Level 3 Priority sites are locations that have environmental constraints limiting development potential, but afford an excellent opportunity for passive recreation uses. These areas are predominately identified as conservation areas and will help to preserve the County's resources. Level 4 Priority sites are largely publicly owned parcels or areas that require additional study to determine suitability for active or passive recreation

use. The sites that are under consideration by the County are described below and listed in order of their Priority Level ranking.

Priority Level 1 Sites - Atlantic County Department of Parks and Recreation has identified six (6) sites located in Egg Harbor Township. The sites are listed by name, acreage and County resource assessment classification in Table 11-5.

Table 11-5
County Priority Level 1 Sites
Egg Harbor Township, Atlantic County, New Jersey

Name	Acres	Resource Assessment Classification
Bike Path East	140 ac.	Linear - Active
Central North Park	274 ac.	Active
Central South Park	265 ac.	Active
Pine-Oak Park Expansion	75 ac.	Local - Active
Waterfront Access	40 ac.	Water
Egg Harbor / Northfield Mini Park	50 ac.	Conservation
Total	***844 ac.***	

Source: Draft of the Atlantic County Open Space and Recreation Plan, July 1999, Table 9.

As noted in Table 11-5, the County plans to expand or create nearly 850 acres of new open space / park / recreation lands in Egg Harbor Township alone.

Priority Level 2 Sites - There are no identified Priority Level 2 sites in Egg Harbor Township.

Priority Level 3 Sites - Two (2) Priority Level 3 sites are identified in Atlantic County. One (1) of these sites - South Park - is located in Egg Harbor Township. This 155-acre site is identified as a conservation resource assessment.

Priority Level 4 Sites - Two (2) Priority Level 4 sites identified by the Atlantic County Department of Parks and Recreation are located in Egg Harbor Township. The DeCarlo Tract is a 240-acre site located off of English Creek Avenue. The second site in the Township is the 70-acre Water Park at the Federal Aviation Administration Technical Facility.

One of the most significant of these sites is the Malibu Beach that is located on Somers Point-Longport Boulevard. This site consists of approximately 300 acres of coastal wetland and upland areas. These areas are important to resident and migrating shorebirds and waterfowl.

The State Green Acres program has targeted this area for acquisition due to its ecological significance. The US Fish and Wildlife Service has also recommended this area for preservation as a "Critical Habitat" for the Piping Plover. It is further identified by the international Shorebird Survey as one of the twenty (20) most

important migratory stops east of the Rocky Mountains for shorebirds. Acquisition of this site will provide additional areas for public access to the Great Egg Harbor Inlet and offer opportunities for environmental education.

2. Municipal

As part of the Township municipal open space fund, a listing of open space acquisition areas has been developed. The exorbitant land values attributed to the demand for land in the Township has made open space acquisition difficult, but the Township is committed to purchasing as much open spaces as possible. The Township has created an open space committee, comprised of two (2) members of the Township Committee, the Township Administrator, the Deputy Administrator, and the Township Engineer. This committee is charged with identifying areas for open space acquisition, and has developed the following list for open space in the Township:

Municipal Park Acquisitions

- **Broadway Tract** – Just west of the Shore Mall, the Broadway Tract is an area targeted for a possible new school along with conservation due to the large amount of environmentally sensitive land. Generally, it is bounded by Broadway Avenue to the East, Spruce Avenue to the west, West Jersey Avenue to the North and Ninth Avenue to the South.
- **Delaware Avenue Tract –** Located on Delaware Avenue between Ridge Avenue and Fernwood Avenue, the Delaware Tract is to be donated to the Township as a recreation component for several major subdivisions. The Township anticipates this land will be used for active recreation.
- **Fernwood Tract –** Located off of Fernwood Avenue, the Fernwood Tract is an area of existing undersized lots on paper streets (avenues A,B, and C) just north of Reega Avenue.
- **Decarlo Tract** – An area just east of English Creek Avenue targeted for conservation due to its environmental sensitivity. Also on Atlantic County's use for possible open space acquisition.
- **Alder Avenue** – The Alder Avenue site is located adjacent to the existing Intermediate School and proposed 3 / 4 school. This site could be used for possible school expansion or development of active recreation.
- **Atlas Lane** – The Atlas Lane acquisition is an approximately twenty (20) acre area adjacent to the MK Betterment Site and proposed Alder Avenue School.
- **High School Area –** The Township is considering a potential land swap to obtain a twenty-five (25) acre parcel adjacent to the high school. This property could be used for an expansion to the high school along with recreational fields.
- **Tobagen Tract –** The Tobagen Tract is located between Zion Road and Leap Street between two (2) recently approved major subdivisions. It is targeted for acquisition due to the tremendous amount of growth in the area and need to preserve open space and provide recreation.

- **Bayberry Tract –** The Bayberry Tract is located off of Ocean Heights Avenue in an area with numerous paper streets between Ocean Heights Avenue and Bayberry Avenue.
- **Naame Tract** – The Naame Tract is located on Leap Street between Ridge Avenue and Bayberry Road. This twenty-five (25) acre tract is in the center of a fast developing area and will be used for open space / possible equestrian center.
- **Crimi Tract** – Adjacent to the Temple Tract, the Crimi Tract is a former gravel pit that the Township may look to acquire for an expansion to the passive recreation proposed for the Temple Tract.

3. Other

Several private individuals or not-for-profit agencies have recreation facilities and are proposing or anticipate expanding operations. The Township has approved two (2) new private golf courses. The approved courses are listed below with their location and proposed amenities:

- **McCullough's Emerald Golf Links** - This proposed golf course is located on Ocean Heights Avenue at a former landfill. The landfill was closed in August 1990 and the golf course was proposed as part of the "capping and remediation" plan. The project is scheduled for completion by June 2002.
- **Hidden Creek** (formerly known as Miry Run) - A 27-hole golf course is proposed on a 750-acre site located on Asbury Road. It is expected to be completed in May, 2002.

E. RECOMMENDATIONS

Egg Harbor Township should continue to assess the need for recreation and open space facilities as growth continues. The following recommendations, if implemented, will help the Township to plan for adequate recreation opportunities to meet the current and future needs of residents while minimizing any necessary expenses.

1. The township should continue to work closely with Atlantic County in coordinating future land acquisitions and improvements for recreation purposes. This type of coordination enables the most efficient use of resources and will result in providing recreation opportunities throughout the Township that are capable of serving both local and regional needs.

2. All potential sources of funding for recreation purchases and improvements should be explored individually and with Atlantic County. Sources may include but not necessarily be limited to Green Acres Funding, the state dedicated open space tax fund, the municipal open space tax fund, private investment, developer contributions and other grant / loan programs.

3. Existing streams and woodlands should be maximized where appropriate as links between major active recreation areas and / or schools. These natural passive

recreation areas encourage wildlife migration and nature study, while providing public access through pedestrian paths, and link individual neighborhoods.

4. The Township should actively seek donations of sizeable vacant parcels in strategic locations.

5. Proper budgeting and incorporating the cost of maintenance in the capital improvement budget will help to preserve the Township extensive investment in recreation and park areas.

6. The Township should explore the acquisition of an additional passive park in the CAFRA area similar in size to the Temple Tract.

7. Acquisition and development of parks should be encouraged in areas that are readily accessible to residents. The Township should continue the policy of establishing larger regional parks while discouraging a proliferation of pocket parks.

8. The Township should continue to explore the acquisition of a 25- to 35-acre park similar to Tony Canale Park in the Pinelands Regional Growth Area along with expansions of both Tony Canale Park and Childs-Kirk Park.

Chapter 12: Land Use Element

A. INTRODUCTION

The Municipal Land Use Law gives a precise definition to a land use plan element as a component of a master plan. It is defined in N.J.S.A 40:55D-28 (b) (2) as a component of the master plan which has the following characteristics:

1. Takes into account the other master plan elements and natural conditions, including, but not necessarily limited to: topography, soil conditions, water supply, drainage, flood plain areas, marshes and woodlands;

2. Shows the existing and proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, educational and other public and private purposes or combination of purposes;

3. Includes a statement of the standards of population density and development intensity recommended for the municipality.

Land Use Element Plan Process

The process which will be followed in developing the land use element plan consists of four basic tasks: research and analysis, policy development, consideration of other plan elements and natural conditions, and plan implementation.

1. Research and Analysis: This is the keystone of planning, the technical foundations which hold together all that follows. The planning board is the body charged with making decisions objectively and in a manner that can be supported, if necessary, in litigation. The technical foundations will be broad based and sufficient to provide reasonably valid conclusions on which policy can be formulated.

2. Policy Development: The land use plan element will include statements of policies expressed as, "goals and objectives." The MLUL now requires that this be done, as stated in N.J.S.A. 40:55D-28(b) (1) that the plan shall have:

   "A statement of objectives, principles, assumptions, policies and standards upon which the constituent proposals for the physical, economic and social development of the municipality are based."

3. Plan Elements and Natural Conditions: These have been referred to earlier under the definition of a land use element plan.

4. Plan Implementation: The earliest concept of a "plan" always directs its energy toward the study's resultant product, that of shaping the future physical character

of the study area. The plan should not result in a planned future of perfection, nor should the plan recommend development patterns that have no relevance to existing reality which are, therefore, virtually impossible to achieve within any foreseeable time horizon.

The clear intent of the MLUL is that in the land use element, as in other subplan elements, realistic and achievable guidelines and recommendations be made to deal with local problems and needs and adequate safeguards be established to protect valuable natural resources. Prepared within this context, the land use element can set the tone for the municipality's future development and provide direction for the establishment of various development controls through zoning, subdivision and site plan regulation. Together with the other master plan elements and a program of capital improvements, these instruments will allow the Township of Egg Harbor to fulfill the intent of the Municipal Land Use Law and provide an effective framework to manage its future growth.

Presented herein is a revised Land Use Element of the Egg Harbor Township Master Plan 2002. The primary objective of this plan is to reduce the density of growth within the pinelands regional growth area, create additional areas for commercial development, and eliminate uses no longer appropriate for the suburban community that Egg Harbor Township has become.

B. THE PINELANDS COMPREHENSIVE MANAGEMENT PLAN

Recognizing the changes which have occurred since the 1993 Land Use Element and the 2000 Reexamination Report along with the need to address a complex set of often conflicting local and regional issues and objectives, the Planning Board has determined that a new master plan is necessary. Predominant among the issues to be addressed is conformance with the Pinelands Comprehensive Management Plan and a reduction of residential growth permitted under the plan. The New Jersey Pinelands has been recognized as a unique and important environmental resource and the Comprehensive Management Plan has been developed to provide a strategy to preserve and protect this area. In 1978, federal legislation established the Pinelands National Reserve and authorized creation of a regional planning body. The Pinelands Commission was created and given responsibility for review and approval of developments in the Pinelands. The principle thrust of the Comprehensive Management Plan is to restrict residential development through strict land-use controls. All municipalities and counties in the Pinelands are required to prepare local plans and land use regulations, including revised zoning ordinances, consistent with the Pinelands Protection Act and the Comprehensive Management Plan.

On January 14 1981, former Governor Brendan Byrne signed into effect the Comprehensive Management Plan for the Pinelands Area. That action represented the culmination of efforts at both the Federal and State levels of government to address the long-standing goal of protecting the Pine Barrens of central and southern New Jersey – a 1.1 million acre area located in one of the nation's most developed and populated regions.

The legislative mandate directing this effort was begun in 1978 with passage of the National Parks and Recreation Act. That day in January 1981 also represented a new beginning. On that day, those counties and municipalities located within the Pinelands Area would begin their part in the design to bring about an intergovernmental approach to the management of the Pinelands. This approach would allow local government, particularly at the municipal level, to continue to exercise its traditionally strong role in the regulation of land use and land development. This exercise of power would be tempered by the need to view land management decisions regarding the Pinelands on a regional basis. With the adoption of the Pinelands Comprehensive Management Plan (CMP) that required regional perspective has been provided. With it, affected local levels of government could begin the conformance process of revising their master plans and related land development ordinances. Utilizing the minimum land use standards defined by the CMP, local planning efforts would be directed towards attaining the key objective – a coordinated management program for the pinelands.

The process of conforming with the requirements of the CMP as applied to Egg Harbor Township has included the completion for the Natural Resource Inventory, the development of revised land development regulations which address specific land use and development practices, and a thorough mapping of developable land located within the areas of the Township under jurisdiction of the Pinelands Commission.

In order to ensure that the development and use of land in the pinelands meets the minimum standards of the Comprehensive Management Plan, the Pinelands Commission established eight management areas governing the general distribution of land uses and intensities in the pinelands. Approximately 13,000 acres in the Township of Egg Harbor has been designated a Regional Growth Area. The CMP also designated a 212-acre area in the northwest portion of the Township as a Rural Development Area. Due to its location, size and proximity to adjacent growth areas the Township, with the approval of the Pinelands Commission has incorporated this area into the Regional Growth Area. This Regional Growth Area encompasses the largest single land area under the jurisdiction of a single municipality in the entire pinelands and is generally bounded by the Garden State Parkway on the east, the Atlantic City Expressway and Wescoat Road on the north, Hamilton Township on the west and Ocean Heights Avenue on the south (Figure 12-1). Regional Growth Areas are recognized as areas of existing growth or lands immediately adjacent there to which are capable of accommodating regional growth influences while protecting the essential character and environmental of the pinelands through municipal master plans and land use ordinances.

Due to the complexity of issues which must be recognized in developing a plan which is acceptable to both the Township and the Pinelands Commission, the Planning Board has been very deliberate ins preparation of the plan for the Regional Growth Area.

C. THE REGIONAL GROWTH AREA

Introduction

The Comprehensive Management Plan defines Regional Growth Areas as "certain land areas within the pinelands where the capability to absorb development is high and the pressure to develop is great." Unlike the other land management districts within the pinelands, Regional Growth Areas are areas where the CMP encourages and directs development pressures, especially residential construction, from throughout the pinelands. These areas are spatially limited in comparison to the total land area involved within the Pinelands National Reserve, creating in effect specific nodes for new development to take place. Regional Growth Areas are allowed the highest density housing development permitted by the CMP. Municipalities also may permit any other land uses as long as the environmental conditions stated in the CMP are met. In designating Regional Growth Areas in this fashion, the Pinelands Commission hopes to achieve the following objectives:

- To establish densities within the district which are sufficiently high so as to encourage a range of housing types;

- To create economies of scale in construction in order to assist in providing housing at least cost; and

- To create opportunities for innovative design approaches which in turn can generate additional community benefits such as increasing the potential for mass transit and other community services, as well as reducing the fiscal impact of new housing.

In terms of the Pinelands Protection Act, the designation of Regional Growth Areas responds to the Commission's legislative mandate that the Comprehensive Management Plan for the Pinelands,

> "….encourage appropriate patterns of compatible residential, commercial and industrial development in or adjacent to areas already utilized for such purposes in order to accommodate regional growth influences in an orderly way while protecting the pinelands environment from the individual and cumulative adverse impacts thereof."

Within this context, the Regional Growth Area is that area within Egg Harbor Township that is afforded the greatest prerogative in shaping the form of new growth within the pinelands portion of the community. To achieve this, the Township is permitted to designate zoning districts with appropriate and flexible density ranges within which residential development at higher densities can occur with the use of Pinelands Development Credits (PDCs) and /or local incentive programs.

The magnitude of the growth anticipated in this area distinguishes it from other locations and necessitates planning policies which are designed for this particular area. These

policies must recognize and account for the essentially rural heritage and character of the Township and provide methods to mitigate impacts on traditional life styles. In order to accommodate anticipated growth, while at the same time protecting the essential character of the Township, it is recommended that densities be established in hierarchical fashion with the greatest intensity occurring between the Black Horse Pike and neighboring communities of Absecon and Hamilton Township and the least intense between Mill Branch and Ocean Heights Avenue/Delaware Road. The intent of this plan is to create lower densities at the sensitive outer edges of the Regional Growth Area adjacent to low density CAFRA areas, and in the core of the Township, and higher densities in areas adjacent to comparable land use or where necessary infrastructure either exists or is planned.

The primary force driving the growth regulations imposed by the Pinelands Commission is protection of the groundwater resource, particularly, the Cohansey aquifer. Water quality standards applicable to both ground and surface water resources are designed to protect the fragile aquatic communities indigenous to the region. In terms of their potential as a limiting factor on new growth, the impact of these standards is significant and can be measured in terms of the more stringent requirements necessary for approval of an on-site septic system. In the unsewered portions of the Regional Growth Area, the minimum lot size for residential use with conventional on-site treatment is three and two-tenths (3.2) acres. The installation of approved alternative disposal systems may be permitted provided the minimum lot size is at least on (1) acre. Due to these restrictions and the housing obligation mandated by the CMP, the Township must carefully plan for areas where future sewerage facilities will be constructed. Although the construction of the Coastal Alternative Interceptor will provide additional sewer service to portions of the Township, outlying areas will remain dependent on on-site systems to dispose of wastewater for many years.

Location Within the Township

Figure 12-1 indicates the location of the Regional Growth Area within Egg Harbor Township. This area totals approximately 14,000 acres, 6,500 acres of which have been determined to be vacant/developable in 1993. For the purpose of this land use element, the calculations for developable land and wetlands were based on values indicated in the 1992/1993 Land Use Element.

The Regional Growth Area contains the Township's most urbanized region. Of the total land area within this Growth Area in 1993, thirty-four (34) percent of it had already been developed and sixteen (16) percent was delineated as wetlands. The presence of various streams and tributaries and associated wetlands represent a significant restraint upon the capacity to totally develop this region. Approximately forty-five (45) percent of total land area was determined to be developable. These factors necessitate that lands in the Growth Area be zoned to accommodate greater densities than permitted elsewhere in the Township.

The environmentally sensitive areas within the Growth Area must be carefully analyzed and comprehensively planned to serve the urban population anticipated as a result of the

CMP housing mandate. An important goal of these efforts is to maintain the environmental sensitivity of the extensive wetlands within the Growth Area, and simultaneously allow for their limited use of recreational and open space areas. The Township should include provisions in its recreation plan and development regulations to utilize certain wetland areas for an interconnected greenway system and passive recreation.

Considering an allocation of approximately 24,000 dwelling units and the associated population at optimal buildout, the Township must prepare for extreme growth pressures. The effects of this growth are apparent in terms of sewer and water infrastructure, the transportation system, educational, community, social and emergency services and provisions for adequate open space and recreational areas. Although the extent of this impact is impossible to determine presently, it is obvious that impacts on these services will be aggravated by implementation of the zoning necessary to satisfy the CMP requirements.

The Township should pursue and encourage efforts to develop recreational facilities in conjunction with a comprehensive open space plan. Due to the necessity for use of the available upland areas for conventional development, policies need to be established which permit the selective use of wetlands for low-impact uses such as hiking, observation and equestrian trails. However, the vital environmental functions of the wetland areas must be paramount in any policy which permits the limited use of these areas.

Minimum Standards Governing the Distribution and Intensity of Development and Land Use

The Pinelands Comprehensive Management Plan affords the Township the prerogative of establishing any type of land use within the Regional Growth Area provided that enough land are at appropriate densities is allocated to accommodate the amount of new housing units required by the CMP.

Residential dwelling units at municipally designated densities, including provisions for the clustering of allocated dwelling units shall be permitted. In addition, a municipality may permit any use which is compatible with a the Pinelands environment and is similar in character, intensity and impact to the following uses:

- Agriculture;
- Agricultural employee housing as an element of and accessory to an active agricultural operation;
- Forestry;
- Recreational facilities, other than amusement parks;

- Agricultural products sales establishments;
- Agricultural processing facilities and other light industrial uses;
- Roadside retail sales and service establishments;
- Resource extraction operations;
- Vegetative waste landfills;
- Public service infrastructure;
- Institutional uses;
- Signs;
- Accessory uses to any of the above.

In Egg Harbor Township the residential use requirement consists of an allocation of 2.5 housing units per developable acre. The number of dwelling units to be accommodated at the base density in this proposed land use plan is about 16,000. In addition, the CMP requires a bonus level of housing capacity equal to fifty percent (50%) of the base housing units with the use of Pinelands Development Credits (PDCs). Applying this bonus percentage to the base level housing capacity results in a total housing capacity requirement of approximately 24,000 dwelling units.

The housing mandate of the CMP can be accommodated within the Regional Growth Area in a variety of ways. The CMP encourages the creation of a variety of zoning districts, each with a distinct range of densities. This approach allows a greater degree of flexibility in which the Regional Growth Area can be planned to accommodate the required housing capacity while also reserving areas for non-residential uses and open space. An additional benefit is also derived from the opportunity to provide for a range of housing types and to explore the use of planned development as an alternative to conventional development practices. While the CMP suggests that proposed zoning districts utilize these ranges, it does not mean that each range must be recognized in the Township's zoning regulations zoned for Regional Growth Area.

- Less than .5 to .5 dwelling units per acre
- 0.5 to 1 dwelling unit per acre
- 1 to 2 dwelling units per acre
- 2 to 3 dwelling units per acre
- 3 to 4 dwelling units per acre
- 4 to 6 dwelling units per acre
- 6 to 9 dwelling units per acre
- 9 to 11 dwelling units per acre

- 12 and greater dwelling units per acre

Each range starts with a base density which can be achieved "by-right", that is, without the acquisition of Pinelands Development Credits. The higher number represents the maximum density that can be achieved with the acquisition of PDCs. These density ranges may be modified to incorporate local incentive programs by extending the upper end of a density range, however, the extent to which the overall housing capacity is increased must be reasonable and designed not to undercut the viability of the Pinelands Development Credits program.

A final constraint of the CMP relates to non-sewered areas. Residential development within such areas cannot exceed a density of one (1) dwelling unit per 3.2 acres if the use is to be serviced by conventional on-site septic systems. The minimum required lot area may be reduced to on (1.0) acres provided the residential use is serviced by an alternative or innovative wastewater system approved by the Pinelands Commission.

Recommended Distribution and Intensity of Development and Land Use

The Regional Growth Area within Egg Harbor Township encompasses a rather large and diverse area. Subareas and neighborhoods can be distinguished by their existing character, the extent to which they have been previously developed, and by their particular locational setting within the natural environment. The land management policies to be established for the Regional Growth Area must, therefore, be as equally sensitive to existing problems, as to how to best plan for and manage the future physical development of these areas. It is the intention of this Land Use Element to provide management policies which are directed towards both aspects of this concern. To that end, the following objectives have been established to guide the development of appropriate land use policies in the Regional Growth Area of Egg Harbor Township.

To provide for the orderly and planned development of land areas through the use of innovative development techniques, which will minimize development's adverse impacts on both the natural resources and man-made environment.

To provide incentives within the land use regulatory structure which will enable the realization of certain community-wide goals which include, but are not limited to, the production of new housing at least cost, the extension of necessary municipal services infrastructure into areas of special environmental concern, and the conservation of open space through planned development.

Federal Aviation Administration Technical Center/ Atlantic City International Airport

A factor which figures prominently in any future development plans is the expansion of both the civil and commercial airport facilities at the Federal Aviation Administration Technical Center and Atlantic City International Airport. Realization of development envisioned will have significant impacts on land use planning in this area of the Township. The influx of hi-tech facilities associated with the anticipated airport expansion will require substantial new housing opportunities and the need for expanded support services.

The prospect of the type of growth projected for the mainland communities necessitates the development of a plan which is detailed enough to address the various issues which may confront the Township while simultaneously being sensitive to changing conditions. Since it is anticipated that Egg Harbor Township will continue to experience significant development pressures for at least the next 10-20 years, it is imperative that provisions for this growth be established in current planning ideologies.

With regard to facilities such as the FAATC, the CMP indicates that,

> "Military and Federal Installation Areas are Federal enclaves within the Pinelands. They represent a unique element of the Pinelands landscape and are a substantial resource to the region and the State, provided that their activities preserve and protect the unique natural, ecological, agricultural, archaeological, historic, scenic, cultural and recreational resources of the Pinelands."
>
> The Federal Aviation Administration Technical Center (FAATC) occupies 3,575 acres in Egg Harbor Township. This facility houses several federal agencies including the US Air Force, NJ Air National Guard, and the US Weather Service. The Atlantic City Air Terminal, also located within the facility, provides for civilian aviation needs in the region. The location of the FAATC facility is indicated in Figure 12-3.

Minimum Standards Governing the Distribution and Intensity of Development and Land Use

The CMP states that, "any use associated with the function of the federal installation may be permitted in a Military and Federal Installation Area, provided that:

1. The use shall not require any development, including public service infrastructure, in the Preservation Area District or in a Forest Area; and

2. All development substantially meets the standards of Article 6 of this Plan (CMP) or an intergovernmental agreement entered into pursuant to Article 4, Part 4 of the CMP (Public Development)."

Additional Considerations

The primary land use consideration for areas adjacent to the FAATC facility is noise generated by aircraft. The runway configurations, shown on Figure 12-3, can be expected to generate average day-night (Ldn) noise levels that may not be compatible with residential development. Table 12-2 compares land use compatibility in various noise exposure zones and is the basis for the suggested zoning district designations and restrictions relative to residential development in areas adjacent to the FAATC.

Given the complexity of issues regarding the Township's position with respect to development pressures exerted by the influences identified above, the utilization of developable lands in the Township must be optimally planned to assure a pattern of orderly growth which is sensitive to the community's existing and prospective social and environmental character.

Table 12-2
Land Use Compatibility in Noise Exposure Zones

Land Use	Compatible Land Use Zones				
	Zone 5 Ldn > 80	Zone 4 Ldn 75-80	Zone 3 Ldn 70-75	Zone 2 Ldn 65-70	Zone 1 Ldn < 65
Residential – Low Density					
Residential – Medium Density, Planned Residential Development					
Residential – High Density, Mobile Homes, Apartments					
Commercial – Retail Intensive: Shopping Centers					
Commercial – Wholesale and Retail Centers					
Commercial – Eating and Drinking Establishments, Hotels and Motels					
Services – Personnel, Business and Professional Offices					
Services - Indoor Recreational, Cultural Activities					
Institutional – Schools, Churches, Hospitals, Nursing Homes					
Institutional – Governmental Services					
Recreational - Playgrounds, Neighborhood Parks					
Recreational – Community and Regional Parks					
Recreational – Golf Course, Riding Stables, Water Recreation					
Recreational – Spectator Sports, Resort and Group Camps, Entertainment Assembly					
Industrial – Manufacturing, Intensive					
Industrial – Manufacturing, Extensive					
Industrial – Petroleum and Chemical Processing					
Agriculture – (Except Livestock), Forestry					
Transportation, Utilities, Quarrying and Fishing Activities					
Wildlife Management, Cemeteries					
Open Space, Water Bodies					

Unacceptable Normally Unacceptable Acceptable

In light of these objectives and in consideration of the minimum standards of the Pinelands CMP, as set forth above, the following land use recommendations for the Regional Growth Area have been established.

Residential Use Zones

Within the growth area five (5) residential use zones are proposed. These zone designations and recommended minimum lot sizes are outlined below:

Table 12-1
Minimum Lot Areas – Pinelands Zones

Zone	Conventional Septic (ac)	Public Sewer (sf)	PDCs (sf)
RG-1	3.2	30,000	17,200
RG-2	3.2	16,000	10,000
RG-3	3.2	10,000	6,700
RG-4	3.2	7,000	3,500*
RG-5	3.2	6,500	2,800*

* For single family attached dwellings, two family dwellings or garden apartments.

Non-Residential Use Zones

For purposes of Commercial, Administrative, and Industrial activities, the following zoning districts are recommended:

Zone		Minimum Lot Size
PO-1	(Professional Office)	80,000 sf
NB	(Neighborhood Business)	40,000 sf
CB	(Community Business)	60,000 sf
HB	(Highway Business)	80,000 sf
RCD	(Regional Commercial District)	3 acres
RP	(Recreation Park)	2 acres
M-1	(Light Industrial)	2 acres
GC	(General Commercial)	40,000 sf

D. THE LAND USE PLAN

The Land Use Plan has been prepared on the basis of specific objectives, principles, assumptions, policies and standards, which have been employed as critical to the process of determining a concept for the future growth and physical development of the Township. The Land Use Plan provides the format for developing the appropriate regulations for delineating specific districts and determining those used most compatible with existing development and the natural environment. The Natural Resource Inventory indicates that Egg Harbor Township possesses many unique characteristics which are irreplaceable. To effectively accommodate the development anticipated as a consequence of the Pinelands housing mandate and protect environmental resources shall require constant attention and strong regulation. Therefore, the Township's zoning and land development ordinances must clearly reflect the land use policies contained herein and establish regulations which establish a program for the continued monitoring of development and its effects.

The Land Use Plan includes an analysis of existing land uses with general recommendations for proposed future uses in the identified zone districts. This analysis evaluates the character and locations of the developed and undeveloped areas in the Township. This information provides a comprehensive perspective which enables an evaluation of the existing character of the community and serves as a foundation upon which to shape future decisions and policies regarding the intensity, type and location of development. The basic data derived from this assessment shall help define:

- The composition of development existing in the community, and how this pattern conforms to future development scenarios;

- The spatial location of development and the relationship between various land uses. This analysis identifies the main concentrations of development and their relationship with existing and anticipated growth patterns;

- The amount of land devoted to each major land use, enabling identification of the dominant land use characteristics in a geographic context;

- The amount of developable land which is presently vacant and suitable for development consideration.

<u>General Objectives</u>

1. To encourage municipal action to guide the appropriate use or development of lands within the Township in a manner which will promote the public health, safety, morals and general welfare.

2. To secure safety from fire, flood, panic and other natural and man-made disasters.

3. To provide adequate light, air and open space.

4. To insure that development within the Township does not conflict with the development and general welfare of neighboring municipalities, the County and the State as a whole.

5. To promote the establishment of appropriate population densities and concentrations that will contribute to the well being of persons, neighborhoods and the preservation of the environment.

6. To provide sufficient space in appropriate locations within the Township for agricultural, residential, recreational/open space, commercial and industrial uses.

7. To promote the conservation of open space and valuable natural resources and to prevent urban sprawl and degradation of the environment through improper use of land.

Land Management Policies

1. To encourage a balance of residential, commercial, industrial and agricultural development in areas and at intensities compatible with environmental and natural resource capabilities.

2. To guide single-family residential development into areas which are accessible and either suitable for on-site septic systems or serviced by existing and/or future public sewerage facilities.

3. To recognize existing patterns and densities of development and encourage future growth that is contiguous with existing developed areas and compatible with its established character and consistent with present health and environmental requirements pertaining to on-site septic disposal.

4. To protect and enhance the quality of life and living environment which has been an essential part of the character of the community historically.

5. To consider and evaluate innovative development proposals which would enhance and protect environmental features, minimize energy usage and encourage a creative design that is also consistent with the other policies of the Township.

6. To encourage and protect the continued development of agricultural uses within the Township.

7. To recognize the ecologically sensitive characteristics of the Pinelands and to encourage only those uses which would be compatible with the Comprehensive Management Plan.

Assumptions

1. That the casino industry, development at the FAATC facility and Atlantic City International Airport and retail businesses will continue to affect growth in Egg Harbor Township.

2. That Egg Harbor Township will be able to guide its growth in accordance with the Municipal Land Use Law and will have a major input into any proposed County, State or regional development policies that may affect the Township.

3. That planning for public sewerage facilities over the next five (5) years will provide sufficient capacity to accommodate new growth that is orderly and avoids sprawl, and that expansion of these facilities will be a function of private land development, documented health hazards and policy decisions by State, County and local agencies.

4. That the Township's critical environmental areas will be maintained by governmental legislation affecting growth and development.

Use Inventory

Approximately forty-one (41) percent of the land area within the Regional Growth Area was considered developed in 1993. The developed category includes those areas which have been improved for residential, commercial, industrial or transportation purposes. The present composition of the Township's land usage suggests that thirty-four (34) percent of the developed land is utilized for residential purposes and twenty-four (24) percent has been developed for commerce. Residential development has generally been in the form of small settlements or subdivisions which are situated along the Township's major road network. However, there have been significant major subdivisions approved along West Jersey Avenue, English Creek Avenue, Delaware Avenue and in other areas which are recognized in this plan.

Although developed lands account for a considerable proportion land use in the Township, the majority of lands can be characterized as undeveloped. Of the total area, vacant/developable lands account for approximately 6,500 acres (45 percent). Wetlands, which account for approximately 1,900 acres of the total Regional Growth Area land mass, constitute a significant proportion of this undeveloped land. These hardwood, cedar and pitch pine lowland wetlands, are especially prevalent adjacent to the Patcong Creek and its tributaries.

Although agricultural production areas do not currently comprise a significant aspect of the Township's landscape or economy, they do serve as an important link with historical land use and as reservoirs of open space. Lands currently considered in active agricultural production totaled approximately 1,200 acres in 1987. This figure represents a twenty

(20) percent decrease in these agriculturally active lands since 1979. Although the necessity of these areas for the continued provision of goods within a regional context is debatable, these areas will become increasingly important open space areas as development activities continue. Within the Regional Growth Area, active agricultural areas are most prominent between Mill and Delaware Road adjacent to the Parkway.

The significance of the Township's undeveloped acreage must be recognized and considered in future planning decisions. The Township's heritage and rural character are assets which should be preserved as they serve to reinforce sensitive environmental systems and promote a sense of balance between man and nature. As development pressures continue, efforts to maintain this balance will become more difficult and will depend increasingly upon proper utilization and planning of the vacant, developable uplands and adjacent wetland corridors. These areas, when planned properly, can provide valuable opportunities for open space, preservation of forest areas, wildlife management areas and access to waterways. In some instances, they can also function as transition zones between highly developed and less developed areas.

Commercial activities in the Township can generally be characterized as exhibiting a range of uses including professional and business offices, restaurants, food markets, delicatessens, personal service establishments, and regional and subregional centers such as the Shore Mall and English Creek Center. These facilities have generally been located as a result of market trend evaluations, a technique that can be expected to continue. In an effort to discourage the inefficiencies of strip development, innovative regulations regarding the location and orientation of commercial uses is necessary. Since traffic generation and access are often difficult issues to address, regulations should be considered which encourage limited and/or shared access, and generous landscaping for aesthetic enhancement.

The changing landscape of Egg Harbor Township has been evident during the last decade. Once a rural community, the Township is fast becoming the suburb that was envisioned during the creation of the Pinelands National Reserve. Numerous factors have influenced the metamorphosis in the Township since the Land Use Element was prepared and the Township received Pinelands certification in 1993. Continued development in the Atlantic City casino market, expansion to the FAA Technical Center and Atlantic City Airport, and continued development of retail stores have combined to result in a prodigious increase in employment over the last ten (10) years. These changes along with stringent development regulations in the non-pinelands areas have resulted in an explosion of new home construction and continued population increases.

The Township is struggling to keep pace with this development from a fiscal standpoint while attempting to preserve the same quality of life for its residents. This Land Use Element helps to ease some of the growth pressures by allowing for a general reduction in density in both pinelands and non-pinelands areas along with the creation of additional commercial areas. Besides the fiscal impact associated with the growth, traffic is the major problem affecting the Township. The reduction in density and creation of additional commercial areas will help to both eliminate new vehicle trips and shorten

existing vehicle trips to commercial areas. A key factor considered with this Land Use Element is the ability of new residents to access major transportation corridors that lead both to Atlantic City and the major retail centers in Hamilton Township.

I. CHANGES SINCE 1993 LAND USE ELEMENT

Several modifications to the Land Use Plan are accomplished through this Land Use Element. These changes along with the rationale for the changes are included below.

Pinelands Regional Growth Area Changes (Residential)

The most important aspect of this Land Use Element is the reduction in residential density mandated for the Growth area. The proposed amendment to the Pinelands Comprehensive Management Plan that would allow a 30% reduction in mandated density (from 3.5 dwelling units/acre to 2.5 dwellings units/acre for the 1993 undeveloped land) is crucial to the future development of the Township. This Land Use Element allows for the 30% reduction while maintaining a similar scheme to the Regional Growth Area Zoning.

The Regional Growth (RG) zones have been established in a hierarchical fashion with the highest density zones between the Black Horse Pike and the neighboring communities of Hamilton Township and Galloway Township. Lower densities are provided for in the southern end of the Growth Area along Ocean Heights Avenue adjacent to lower growth lands under the jurisdiction of the New Jersey Department of Environmental Protection through the State Development and Redevelopment Plan and CAFRA regulations. Specific changes include the following:

1. Conversion of the RG-2 zone between Dogwood Avenue and Atlas Lane Road to the RG-1 zone.

2. Conversion of the RG-3 zone east of English Creek Avenue between West Jersey Avenue and Ocean Heights Avenue to the RG-1 zone.

3. Conversion of the RG-2 zone south of Mill Road to Ocean Heights Avenue to the RG-1 zone.

4. Conversion of the RG-4 zone between Zion Road and Old Zion Road to the RG-1 zone.

5. Conversion of the RG-3 zone between the Garden State Parkway and Old Zion Road south of Central Avenue to the RG-1 zone.

6. Conversion of the RG-4 zone along Mill Road between Delaware Avenue and Oakland Avenue to the RG-1 and RG-2 zones (RG-1 for the area south of Mill Road and RG-2 for the areas north of Mill Road).

7. Conversion of the RG-4 zone along Ridge Avenue (previously the RG-5 zone) to the RG-2 zone.

8. Conversion of the RG-4 zone along West Jersey Avenue adjacent to the Shore Mall to the RG-2 zone.

9. Modification of the RG-4 zone between Tremont Avenue and Cates Road to the RG-3 zone (proposed RG-3 zone allows the same density as the former RG-4 zone).

10. Density reduction of the RG-4 zone between English Creek Avenue and Hamilton Township (previously the RG-5 zone) to the RG-2 zone.

11. Conversion of a portion of the RG-6 zone between exit 9 of the Atlantic City Expressway and Hamilton Township into the new RG-5 zone.

12. Conversion of a portion of the M-1 Light Industrial Zone adjacent to Westcoat Road located between East Atlantic Avenue and the Garden State Parkway to the RG-5 zone.

13. Establishment of the RG-5 zone created in items 11 and 12. The RG-5 zone allows the greatest density achievable under this plan - five (5) dwelling units/acre base and 7.5 dwelling units/acre with PDC's due to its proximity to the Atlantic City Expressway and Delilah Road. The new RG-5 zone will also allow for several conditional uses including two-family dwellings, single-family attached dwellings, Garden Apartments, Planned Adult Communities and Mixed Use Developments in order to allow the greatest flexibility in housing types. The RG-5 zone is designed to encourage a mix of housing types and uses in larger scale developments in order to promote senior housing communities and other affordable housing types.

These modifications to the Residential Components of the Growth Area result in the following classifications and general areas as shown in Figure 12-2.

RG-1: Two (2) areas will be located in the RG-1 zone. The first is bounded by English Creek Avenue to the east, Hamilton Township to the west, Ocean Heights Avenue to the south and Atlas Lane Road to the north. The second area lies on the opposite side of English Creek Avenue and is generally bounded by English Creek Avenue to the west, the Garden State Parkway to the east, Ocean Heights Avenue to the south and the RG-2 and RG-3 zones to the north.

The RG-1 zone allows the least amount of density in the Growth Area, at a base density of 1 dwelling units/acre and 1.5 dwelling units/acre with PDC's. This classification is designed to recognize environmentally sensitive areas within the zone and provide for development north of

Ocean Heights Avenue to be consistent with lower density development on the south side of Ocean Heights Avenue.

RG-2: There are also two areas for RG-2 development. The first is bounded by English Creek Avenue to the east, Hamilton Township to the west, West Jersey Avenue to the south and the Tower Avenue Commercial projects (Home Depot, Saturn, etc.) to the north. The second area is generally bounded by English Creek Avenue to the west, the Garden State Parkway to the east, the Highway Business Zone along the Black Horse Pike and the proposed RG-1 zone to the south.

The RG-2 zone allows single-family detached dwellings at a base density of 2 dwelling units/acre and 3 dwellings units/acre with PDC's. This classification is designed to recognize environmentally sensitive areas while allowing the same type housing as the RG-1 zone at a greater density.

RG-3: The RG-3 zone is located generally between West Jersey Avenue and Atlas Lane Road on both sides of English Creek Avenue. It extends to Tremont Avenue on the east and Cates Road on the west and is bisected by the Professional Office Zoning along English Creek Avenue.

Since the proposed RG-3 zone allows the same density as the former RG-4 zone, no change has occurred in this area with the exception of the Professional Office Zoning along English Creek Avenue. The purpose of the RG-3 zoning is to recognize developed areas while allowing infill development with single-family or two-family housing.

RG-4: The RG-4 zone is the former RG-6 zone north of the Highway Business Zone along the Black Horse Pike and south of the Atlantic City Expressway. Portions of the former RG-6 zone have been converted to the RG-5 zone and the Highway Business Zone.

The RG-4 zone allows the second highest density development in the Township at a base density of 4 dwelling units/acre and 6 dwelling units/acre with PDC's. Its purpose is to allow a mix of housing types – single-family detached dwellings, two-family detached dwellings, and garden apartments at a greater density due to its proximity to major transportation corridors and to existing or proposed infrastructure.

RG-5: The RG-5 zone is the conversion of a portion of the former RG-6 zone and M-1 Light Industrial Zone, to create two (2) distinct areas. The first area is located on both sides of the Atlantic City Expressway between exit 9 of the Atlantic City Expressway and Hamilton Township. The second area is

located between the Garden State Parkway and Westcoat Road north of East Atlantic Avenue.

The purpose of the RG-5 zone is to allow the greatest mix of housing types at the greatest density permitted in the Township. It also allows for mixed-use developments in larger-scale projects. It promotes flexibility of design and areas for affordable housing. It allows the greatest density in the Township due to its proximity to existing transportation networks and infrastructure.

Pinelands Regional Growth Area Changes (Commercial)

The conversion of a portion of the Light Industrial Zone to the RG-5 Residential Zone resulted in the need to convert some residential areas to commercial areas in order to maintain the same approximate residential land area as the 1993 Land Use Plan. The expansion / creation of commercial zones in the regional growth area are as follows:

1. The Professional Office Zone was extended along the length of English Creek Avenue between the existing PO-2 and PO-1 zones on English Creek Avenue. In addition, all Professional Office Zoning will be modified to a minimum 80,000 square foot lot size from the former 5 acre or 2.5 acre size in order to allow for smaller personal service offices for doctors, dentists, etc. along English Creek Avenue.

   The expansion of the Professional Office Zone is designed to recognize existing professional offices that received use variance approval form the Zoning Board and promote continued development of professional offices along English Creek Avenue.

2. A Neighborhood Business Zone is proposed at the intersection of English Creek Avenue and West Jersey Avenue. The continued residential development in lands surrounding this area along with the improvements to signalize this intersection warrant the introduction of the additional uses permitted under the Neighborhood Business Zone.

3. Expansion of the Community Business Zone is proposed along Ocean Heights Avenue north of the existing Community Business Zone. The purpose is to allow additional commercial development and recognize an existing commercial establishment (Lloyd's Deli) along one of the Township's most traveled streets.

4. Conversion of the Regional Business (RB) Zone in the area of the Shore Mall to the Regional Commercial District (RCD) that existed on the opposite side of the Garden State Parkway. The RB and RCD zones were similar in nature but distinct due to their geographical location on opposite sides of the Parkway. This modification allows for the expansion of the RCD zone while incorporating uses

allowed in the RB zone into the RCD zone. It will allow for consistency in the Township's zoning scheme and compatibility of uses in this area.

5. Expansion of the Highway Business (HB) Zoning along the Black Horse Pike is proposed for vacant lands formerly in the RG-6 zone. This modification allows for additional commercial development and provides additional land area needed to promote larger scale commercial projects along the Township's major business corridor.

6. The establishment of a General Commercial (GC) District is provided for the area surrounding the Offshore Commercial Park and former CB zone around the Airport Circle. The GC District will allow for a hybrid of the uses allowed for the Community Business Zone and M-1 Light Industrial Zone. The GC zone will also provide the commercial uses authorized under the mixed-use provision of the RG-5 zone because of its proximity to the proposed RG-5 zones.

Non-Pinelands Areas (Residential)

The explosion in residential development in the Pinelands Regional Growth Area has forced the Township to review densities in both the Pinelands and Non-Pinelands areas. The review of the residential areas outside of the Pinelands has generated the following recommendations:

1. The conversion of the R-4 Residential area between the Atlantic City Expressway and Fire Road / Washington Avenue to a R-2 Residential area. This change will reduce the capacity of the vacant developable land in the existing R-4 zone.

2. Modify the R-4 zone along Old Egg Harbor Road to recognize the existing multi-family developments in this area including London Court, Oxford Village, etc.

Non-Pinelands Areas (Commercial)

An overall goal of this Master Plan is to expand areas for commercial zoning where appropriate while eliminating uses that are no longer appropriate for the suburban community that Egg Harbor Township has become. With this goal in mind, the following modifications are recommended to promote appropriate commercial development in Non-Pinelands areas:

1. Convert a portion of the M-1 Light Industrial Zone along the Black Horse Pike / Old Egg Harbor Road to the Regional Commercial Development (RCD) Zone. Maintain the existing the M-1 zoning for the existing Penn Jersey facility and area immediately surrounding the facility. This change is proposed to eliminate the industrial developments currently allowed in the M-1 zone, but still provides for the commercial development permitted in the RCD zone. The continued development of residential areas that are not compatible with some of the industrial uses permitted in the M-1 zone in this area.

2. An expansion of the Neighborhood Business (NB) zoning district is proposed at the intersection of Ocean Heights Avenue and English Creek Avenue – East along Ocean Heights Avenue and South along English Creek Road. The introduction of several commercial uses including WaWa, The English Creek Car Wash, and Ocean City Home Bank along with the improvements to realign Mill Road and signalize this intersection warrant the conversion of the southwest corners of the intersection to a commercial zoning district.

3. An expansion of the Community Business (CB) zone is proposed west along Ocean Heights Avenue from the intersection of Ocean Heights Avenue and Zion Road. This expansion will encompass existing non-residential uses (A church and day care facility) and allow for commercial development of vacant lands between Veterans Memorial Park and Ocean Heights Avenue.

4. The introduction of a limited Neighborhood Business (NB) zone is proposed for the intersection of Bargaintown Road and Steelmanville Road/Poplar Avenue. This commercial zoning designation is proposed to recognize existing non-residential uses (Patcong Farms, Chucks Hideaway, and a religious facility) along with promoting a limited scope of Neighborhood Business uses at the intersection of two (2) major county arterial roadways. The intent of this zoning designation is to provide personal service establishments and commercial uses necessary due to the increase in population of the area that are compatible with the surrounding residential neighborhood.

   The limited scope of the Neighborhood Business Zone is proposed to only permit certain uses allowed in the Neighborhood Business Zones that are compatible with the surrounding neighborhoods. The permitted principal uses would include items 1, 2, 3, 4 (excluding liquor stores) and 5 of the uses permitted in the NB zone. The designation will allow for the establishments and services needed by the residents in this area while limiting the impacts to the community.

5. The conversion of a portion of the existing R-4 zone along Hingston Avenue between Old Egg Harbor Road and the existing commercial development along Tilton Road is proposed to a PO-1 (Professional Office) zone. This zoning designation will provide for a low impact commercial zone that will serve to buffer the existing multi-family developments on Old Egg Harbor Road from the retail/commercial development along Fire Road and Tilton Road.

6. The expansion of the Special Highway Development (SHD) Zone is proposed for the south side of the Black Horse Pike in the West Atlantic City portion of the Township along with the elimination of the existing R-5 apartment zone. This modification serves to promote the commercial uses appropriate for this section of the Black Horse Pike as well as preparing for the cooperative effort between the Township and Casino Reinvestment Development Authority for the redevelopment of West Atlantic City.

7. The conversion of the M-1 zone East of the Garden State Parkway from Tilton Road to Mill Road to an RCD zone is proposed. This change is proposed due to the retail development along Fire Road and desire to eliminate new industrial development which would not be compatible with the existing development. The RCD zoning designation will recognize existing commercial development along Fire Road and provide for future development consistent with existing development.

These changes to the Egg Harbor Township Land Use Element will serve to meet the states goals of a density reduction, growth management, introduction of additional commercial areas, and elimination of uses in certain areas, which are no longer compatible with the surrounding neighborhoods. It will help to preserve open space areas, limit the number and length of trips on municipal streets, and provide for residential housing at more appropriate densities than is currently allowed under the Pinelands comprehensive management plan.

II. ZONING DESCRIPTIONS

Establishment of the residential districts is based on the Township's desire to locate the majority of the Pinelands-induced growth in the northern areas of the Township near the major transportation corridors such as the Black Horse Pike, Delilah Road, the Atlantic City Expressway and Tilton Road. The less dense districts are in the southern portion of the Pinelands area adjacent to the CAFRA areas.

Residential (Regional Growth Area)

RG-1 – This district is the least dense of the residential regional growth zones and consists of two areas along Ocean Heights Avenue (CR Alt. 559). Densities of 1.0 Dwelling Unit (DU)/Acre and 1.5 DU/Acre with PDCs are recommended in this district. Recommended minimum lot sizes for base and PDC densities are 30,000 square feet and 17,200 square feet, respectively. There were 3,367 acres of undeveloped uplands in this district in 1993. Single-family detached dwellings shall be the only residential unit type permitted in this zone.

RG-2 – This proposed district encompasses 2,576 acres of undeveloped uplands in two areas along English Creek Avenue between West Jersey Avenue and the RG-1 zone. Densities of 2.0 DU / Acre base and 3.0 DU / Acre with PDC's are recommended in this district. Recommended lot sizes are 16,000 square feet and 10,000 square feet, respectively.

RG-3 – Single-family detached dwellings at a density of 3 DU/Acre on lots of at least 10,800 square feet are recommended for this district. Purchase of PDCs will enable an increase in density to 4.5 DU/Acre and a reduction in lot size to 6,700 square feet. This district includes 132 acres of undeveloped uplands, in two separate areas on either side of English Creek Avenue, on the south side of West Jersey Avenue. This

zone will allow for single-family detached dwellings and two-family dwellings as a conditional use.

RG-4 – This district encompasses 196 acres of undeveloped uplands in three areas north of the Black Horse Pike. This district is recommended for higher density residential development at 4 to 6 DU/Acre. The recommended minimum lot area for this district is 7,000 square feet for all single-family detached dwellings. Utilization of PDCs is permitted as a means to reduce lot size to 3,500 square feet for single-family attached dwellings. Permitted housing types in the rg-4 residential zone will include single-family detached dwellings, two-family dwellings and single-family attached dwellings.

RG-5 – Recommended densities range from 5 to 7.5 DU/Acre depending on PDC use. Lot sizes associated with these densities are 6,500 square feet and 2,800 square feet, respectively. This district includes 639 acres of undeveloped uplands in two areas in the northern portion of the Township. This zone allows for the highest intensity residential development and greatest flexibility of housing types. Permitted / conditional residential units include single-family detached dwellings, two-family dwellings, single-family attached dwellings and garden apartments. The RG-5 zone will also allow for larger scale developments including planned adult communities and mixed-use developments.

A comparison of the Pinelands areas and mandated residential units for the 1993 Land Use Element and 2002 Land Use Element is shown in Tables 12-3 and 12-4.

Residential (outside of Regional Growth Area)

R-1 – This district is comprised of two areas in the southern portion of the Township, both adjacent to RG-1 zones because of the similar zoning densities. One zone is east of the Parkway between Mill Road and Central Avenue, and the other is south of Ocean Heights Avenue between the rural agricultural (RA) zone and Robert Best Road. Minimum lot size is 40,000 square feet and single-family dwellings are the only permitted housing type.

R-2 – There are two (2) existing zones south of Ocean Heights Avenue. A third zone is proposed in the northeast of the Township that is comprised of an existing R-3 and R-4 zone east of the Parkway and south of the Expressway. Minimum lot size is 30,000 square feet and single-family dwellings are the only permitted housing type.

R-3 – There are four (4) pockets of R-3 zones south of Ocean Heights Avenue, an existing zone east of the Parkway between Ocean Heights Avenue and Central Avenue, and another zone straddling the Expressway on the eastern border of the Township. Minimum lot size is 14,000 square feet and single-family dwellings are the only permitted housing type.

R-4 – There are two (2) zones in the northern portion of the Township along the eastern border – one along Old Tilton Road and one adjacent to both Absecon and Pleasantville. Minimum lot size is 10,000 square feet. Both single-family dwellings and multi-family residential are proposed to be permitted in the R-4 zone.

R-5 – There are two (2) zones in the West Atlantic City section of the Township. Minimum lot size is 6,000 square feet. These higher density zones are located in this area in order to recognize the existing developed areas of West Atlantic City. Single-family dwellings, multi-family residential dwellings and planned unit developments are permitted in the R-5 zone.

R-6 – The Anchorage Poynte and Seaview Harbor neighborhoods are in the R-6 zones. Minimum lot size is 5,000 square feet with single-family dwellings the only permitted housing type.

Business

The Professional Office (PO-1) designation is proposed for three areas along English Creek Avenue between Ocean Heights Avenue and the Atlantic City Expressway. A fourth zone will be located along Hingston Avenue and Old Tilton Road in the northeastern portion of the Township. The PO-1 designation is intended as a means of providing land for a variety of business and office uses, while not impacting an area with an inappropriate volume of traffic or a high intensity land use.

Commercial

The Highway Business (HB) district runs along both sides of the Black Horse Pike from the Hamilton Township border to the intersection with the West Jersey railroad line.

The Neighborhood Business (NB) and Community Business (CB) Zones have been established in certain locations where traffic generation and development have created a need for the services permitted in these zones. There are two NB zones along English Creek Avenue – one at West Jersey Avenue and one at Ocean Heights Avenue. Two other NB zones are located along Steelmanville Road at the intersections of Bargaintown Road and Ocean Heights Avenue. One CB zone is proposed at the intersection of Ocean Heights Avenue and Zion Road.

The Special Highway Development (SHD) district is located along the Black Horse Pike in the West Atlantic City section of the Township. This zone has a minimum lot size of 1.8 acres and allows the same principal uses as the NB zone along with motels and resort recreation uses that are complementary due to its proximity to Atlantic City.

The Regional Commercial Development (RCD) district is located in the northeastern section of the Township along portions of the Garden State Parkway, Fire Road, Tilton Road and the Black Horse Pike. The minimum lot size is three (3) acres. The provision for planned development in the RCD zone has been eliminated in this Land Use Element.

The Marine Commercial (MC) district is comprised of four (4) areas – three (3) in the back bay areas and one (1) adjacent to Patcong Creek. The purpose of this district is to provide and encourage the development of waterfront facilities for recreational purposes and provide public access to the vast waterfront throughout the Township. Minimum lot size is five (5) acres.

The proposed General Commercial (GC) district will be located in the northern part of the Township and be comprised of portions of the existing M-1, CB, HB and RG-6 zones. This zone is located west of the Garden State Parkway, mostly between the Atlantic City Expressway and Delilah Road. Minimum lot size is 40,000 square feet. The GC District is designed to allow various commercial / retail uses while excluding industrial development.

Industrial

The Township's current zoning ordinance identifies two (2) industrial districts distinguishable by the relative intensity and class of use permitted. The existing Light Industrial (M-1) district permits farms, retail and wholesale business in addition to the uses allowed in the more stringent Restricted Industrial (R-I) zone. It was recommended that portions of the M-1 zones in the north and east of the Township be converted to various commercial and residential zones due to the existing nature of development in these areas and their proximity to major transportation corridors. The remaining M-1

area and the existing Restricted Industrial (R-I) zone should be retained as is with the existing lot size requirements and permitted uses.

The proposed Light Industrial (M-1) zone is comprised of two (2) areas. The first area includes the existing Penn Jersey facility on Fire Road just north of the Black Horse Pike along with some surrounding land. The second area extends from the City of Pleasantville to Hamilton Township in the northeastern side of Egg Harbor Township and includes various existing industrial uses including the FAA Technical Center and Atlantic City Airport.

The Restricted Industrial (RI) district remains unchanged. It is located on the south side of Ocean Heights Avenue just east of Zion Road.

Other

The Conservation-Recreation-Wetland (CRW) district promotes the preservation of wetland areas along the Great Egg Harbor River and in the back bay areas along the Intracoastal Waterway. The minimum lot size is five (5) acres.

The Rural Agriculture (RA) district is in the southwest corner of the Township adjacent to the CRW zone and south of Ocean Heights Avenue. This zone has a minimum lot size of 2.3 acres.

The Recreation Park (RP) district allows golf courses and commercial and public recreation facilities in an area along Ocean Heights Avenue and Zion Road. Minimum lot size is 175 acres.

The Auto Services Overlay (ASO) is located in the R-1 zone south of Ocean Heights Avenue. This overlay has the same bulk requirements as the R-1 zone and provides for the sales and service of automobiles.

All proposed zoning designations are shown in greater detail on Figure 12-2.

Chapter 12: Land Use Element

A. INTRODUCTION

The Municipal Land Use Law gives a precise definition to a land use plan element as a component of a master plan. It is defined in N.J.S.A 40:55D-28 (b) (2) as a component of the master plan which has the following characteristics:

1. Takes into account the other master plan elements and natural conditions, including, but not necessarily limited to: topography, soil conditions, water supply, drainage, flood plain areas, marshes and woodlands;

2. Shows the existing and proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, educational and other public and private purposes or combination of purposes;

3. Includes a statement of the standards of population density and development intensity recommended for the municipality.

Land Use Element Plan Process

The process which will be followed in developing the land use element plan consists of four basic tasks: research and analysis, policy development, consideration of other plan elements and natural conditions, and plan implementation.

1. Research and Analysis: This is the keystone of planning, the technical foundations which hold together all that follows. The planning board is the body charged with making decisions objectively and in a manner that can be supported, if necessary, in litigation. The technical foundations will be broad based and sufficient to provide reasonably valid conclusions on which policy can be formulated.

2. Policy Development: The land use plan element will include statements of policies expressed as, "goals and objectives." The MLUL now requires that this be done, as stated in N.J.S.A. 40:55D-28(b) (1) that the plan shall have:

   "A statement of objectives, principles, assumptions, policies and standards upon which the constituent proposals for the physical, economic and social development of the municipality are based."

3. Plan Elements and Natural Conditions: These have been referred to earlier under the definition of a land use element plan.

4. Plan Implementation: The earliest concept of a "plan" always directs its energy toward the study's resultant product, that of shaping the future physical character

of the study area. The plan should not result in a planned future of perfection, nor should the plan recommend development patterns that have no relevance to existing reality which are, therefore, virtually impossible to achieve within any foreseeable time horizon.

The clear intent of the MLUL is that in the land use element, as in other subplan elements, realistic and achievable guidelines and recommendations be made to deal with local problems and needs and adequate safeguards be established to protect valuable natural resources. Prepared within this context, the land use element can set the tone for the municipality's future development and provide direction for the establishment of various development controls through zoning, subdivision and site plan regulation. Together with the other master plan elements and a program of capital improvements, these instruments will allow the Township of Egg Harbor to fulfill the intent of the Municipal Land Use Law and provide an effective framework to manage its future growth.

Presented herein is a revised Land Use Element of the Egg Harbor Township Master Plan 2002. The primary objective of this plan is to reduce the density of growth within the pinelands regional growth area, create additional areas for commercial development, and eliminate uses no longer appropriate for the suburban community that Egg Harbor Township has become.

B. THE PINELANDS COMPREHENSIVE MANAGEMENT PLAN

Recognizing the changes which have occurred since the 1993 Land Use Element and the 2000 Reexamination Report along with the need to address a complex set of often conflicting local and regional issues and objectives, the Planning Board has determined that a new master plan is necessary. Predominant among the issues to be addressed is conformance with the Pinelands Comprehensive Management Plan and a reduction of residential growth permitted under the plan. The New Jersey Pinelands has been recognized as a unique and important environmental resource and the Comprehensive Management Plan has been developed to provide a strategy to preserve and protect this area. In 1978, federal legislation established the Pinelands National Reserve and authorized creation of a regional planning body. The Pinelands Commission was created and given responsibility for review and approval of developments in the Pinelands. The principle thrust of the Comprehensive Management Plan is to restrict residential development through strict land-use controls. All municipalities and counties in the Pinelands are required to prepare local plans and land use regulations, including revised zoning ordinances, consistent with the Pinelands Protection Act and the Comprehensive Management Plan.

On January 14 1981, former Governor Brendan Byrne signed into effect the Comprehensive Management Plan for the Pinelands Area. That action represented the culmination of efforts at both the Federal and State levels of government to address the long-standing goal of protecting the Pine Barrens of central and southern New Jersey – a 1.1 million acre area located in one of the nation's most developed and populated regions.

The legislative mandate directing this effort was begun in 1978 with passage of the National Parks and Recreation Act. In June, 1979 came the Pinelands Protection Act and the establishment of the Pinelands Commission. In 1981, the regulations that govern all development in the Pinelands National Reserve were created when Governor Byrne signed into effect the Pinelands Comprehensive Management.

That day in January, 1981 represented a new beginning. On that day, those counties and municipalities located within the Pinelands Area would begin their part in the design to bring about an intergovernmental approach to the management of the Pinelands. This approach would allow local government, particularly at the municipal level, to continue to exercise its traditionally strong role in the regulation of land use and land development. This exercise of power would be tempered by the need to view land management decisions regarding the Pinelands on a regional basis. With the adoption of the Pinelands Comprehensive Management Plan (CMP) that required regional perspective has been provided. With it, affected local levels of government could begin the conformance process of revising their master plans and related land development ordinances. Utilizing the minimum land use standards defined by the CMP, local planning efforts would be directed towards attaining the key objective – a coordinated management program for the pinelands.

Egg Harbor Township was reluctant to go into compliance with the Pinelands Comprehensive Management Plan due to the significant growth mandated for the Township. At a base density of 3.5 dwelling units per acre and 5.25 dwelling units per acre through Pinelands Development Credit acquisition, the additional 22,000 – 33,000 homes mandated by the plan would have a staggering affect for the community. The additional 75,000 residents that the Pinelands zoning would bring to the Township was an incredible number when considering that the Township had only 19,000 residents around the time the Commission was established. Nevertheless, despite continued objections and battles on many aspects of the Commission and Comprehensive Management Plan, the Township was forced into compliance in 1993 when the Commission began approving projects without any local review.

The process of conforming with the requirements of the CMP as applied to Egg Harbor Township has included the completion for the Natural Resource Inventory, the development of revised land development regulations which address specific land use and development practices, and a thorough mapping of developable land located within the areas of the Township under jurisdiction of the Pinelands Commission.

In order to ensure that the development and use of land in the pinelands meets the minimum standards of the Comprehensive Management Plan, the Pinelands Commission established eight management areas governing the general distribution of land uses and intensities in the pinelands. Approximately 13,000 acres in the Township of Egg Harbor has been designated a Regional Growth Area. The CMP also designated a 212-acre area in the northwest portion of the Township as a Rural Development Area. Due to its location, size and proximity to adjacent growth areas the Township, with the approval of the Pinelands Commission has incorporated this area into the Regional Growth Area.

This Regional Growth Area encompasses the largest single land area under the jurisdiction of a single municipality in the entire pinelands and is generally bounded by the Garden State Parkway on the east, the Atlantic City Expressway and Wescoat Road on the north, Hamilton Township on the west and Ocean Heights Avenue on the south (Figure 12-1). Regional Growth Areas are recognized as areas of existing growth or lands immediately adjacent there to which are capable of accommodating regional growth influences while protecting the essential character and environmental of the pinelands through municipal master plans and land use ordinances.

Due to the complexity of issues which must be recognized in developing a plan which is acceptable to both the Township and the Pinelands Commission, the Planning Board has been very deliberate ins preparation of the plan for the Regional Growth Area.

C. THE REGIONAL GROWTH AREA

Introduction

The Comprehensive Management Plan defines Regional Growth Areas as "certain land areas within the pinelands where the capability to absorb development is high and the pressure to develop is great." Unlike the other land management districts within the pinelands, Regional Growth Areas are areas where the CMP encourages and directs development pressures, especially residential construction, from throughout the pinelands. These areas are spatially limited in comparison to the total land area involved within the Pinelands National Reserve, creating in effect specific nodes for new development to take place. Regional Growth Areas are allowed the highest density housing development permitted by the CMP. Municipalities also may permit any other land uses as long as the environmental conditions stated in the CMP are met. In designating Regional Growth Areas in this fashion, the Pinelands Commission hopes to achieve the following objectives:

- To establish densities within the district which are sufficiently high so as to encourage a range of housing types;

- To create economies of scale in construction in order to assist in providing housing at least cost; and

- To create opportunities for innovative design approaches which in turn can generate additional community benefits such as increasing the potential for mass transit and other community services, as well as reducing the fiscal impact of new housing.

In terms of the Pinelands Protection Act, the designation of Regional Growth Areas responds to the Commission's legislative mandate that the Comprehensive Management Plan for the Pinelands,

> "….encourage appropriate patterns of compatible residential, commercial and industrial development in or adjacent to areas already utilized for such

> purposes in order to accommodate regional growth influences in an orderly way while protecting the pinelands environment from the individual and cumulative adverse impacts thereof."

Within this context, the Regional Growth Area is that area within Egg Harbor Township that is afforded the greatest prerogative in shaping the form of new growth within the pinelands portion of the community. To achieve this, the Township is permitted to designate zoning districts with appropriate and flexible density ranges within which residential development at higher densities can occur with the use of Pinelands Development Credits (PDCs) and /or local incentive programs.

The magnitude of the growth anticipated in this area distinguishes it from other locations and necessitates planning policies which are designed for this particular area. These policies must recognize and account for the essentially rural heritage and character of the Township and provide methods to mitigate impacts on traditional life styles. In order to accommodate anticipated growth, while at the same time protecting the essential character of the Township, it is recommended that densities be established in hierarchical fashion with the greatest intensity occurring between the Black Horse Pike and neighboring communities of Absecon and Hamilton Township and the least intense between Mill Branch and Ocean Heights Avenue/Delaware Road. The intent of this plan is to create lower densities at the sensitive outer edges of the Regional Growth Area adjacent to low density CAFRA areas, and in the core of the Township, and higher densities in areas adjacent to comparable land use or where necessary infrastructure either exists or is planned.

The primary force driving the growth regulations imposed by the Pinelands Commission is protection of the groundwater resource, particularly, the Cohansey aquifer. Water quality standards applicable to both ground and surface water resources are designed to protect the fragile aquatic communities indigenous to the region. In terms of their potential as a limiting factor on new growth, the impact of these standards is significant and can be measured in terms of the more stringent requirements necessary for approval of an on-site septic system. In the unsewered portions of the Regional Growth Area, the minimum lot size for residential use with conventional on-site treatment is three and two-tenths (3.2) acres. The installation of approved alternative disposal systems may be permitted provided the minimum lot size is at least on (1) acre. Due to these restrictions and the housing obligation mandated by the CMP, the Township must carefully plan for areas where future sewerage facilities will be constructed. Although the construction of the Coastal Alternative Interceptor will provide additional sewer service to portions of the Township, outlying areas will remain dependent on on-site systems to dispose of wastewater for many years.

Location Within the Township

Figure 12-1 indicates the location of the Regional Growth Area within Egg Harbor Township. This area totals approximately 14,000 acres, 6,500 acres of which have been determined to be vacant/developable in 1993. For the purpose of this land use element,

the calculations for developable land and wetlands were based on values indicated in the 1992/1993 Land Use Element. The 2002 Land Use Element does factor in the reduction in intensity of development for several Regional Growth Areas in New Jersey from 3.5 dwelling units per acre to 2.5 dwelling units per acre in accordance with N.J.A.C. 7:50-3.39 and 5.28.

The Regional Growth Area contains the Township's most urbanized region. Of the total land area within this Growth Area in 1993, thirty-four (34) percent of it had already been developed and sixteen (16) percent was delineated as wetlands. The presence of various streams and tributaries and associated wetlands represent a significant restraint upon the capacity to totally develop this region. Approximately forty-five (45) percent of total land area was determined to be developable. These factors necessitate that lands in the Growth Area be zoned to accommodate greater densities than permitted elsewhere in the Township.

The environmentally sensitive areas within the Growth Area must be carefully analyzed and comprehensively planned to serve the urban population anticipated as a result of the CMP housing mandate. An important goal of these efforts is to maintain the environmental sensitivity of the extensive wetlands within the Growth Area, and simultaneously allow for their limited use of recreational and open space areas. The Township should include provisions in its recreation plan and development regulations to utilize certain wetland areas for an interconnected greenway system and passive recreation.

Considering an allocation of approximately 24,000 dwelling units and the associated population at optimal buildout, the Township must prepare for extreme growth pressures. The effects of this growth are apparent in terms of sewer and water infrastructure, the transportation system, educational, community, social and emergency services and provisions for adequate open space and recreational areas. Although the extent of this impact is impossible to determine presently, it is obvious that impacts on these services will be aggravated by implementation of the zoning necessary to satisfy the CMP requirements.

The Township should pursue and encourage efforts to develop recreational facilities in conjunction with a comprehensive open space plan. Due to the necessity for use of the available upland areas for conventional development, policies need to be established which permit the selective use of wetlands for low-impact uses such as hiking, observation and equestrian trails. However, the vital environmental functions of the wetland areas must be paramount in any policy which permits the limited use of these areas.

Minimum Standards Governing the Distribution and Intensity of Development and Land Use

The Pinelands Comprehensive Management Plan affords the Township the prerogative of establishing any type of land use within the Regional Growth Area provided that enough

land are at appropriate densities is allocated to accommodate the amount of new housing units required by the CMP.

Residential dwelling units at municipally designated densities, including provisions for the clustering of allocated dwelling units shall be permitted. In addition, a municipality may permit any use which is compatible with a the Pinelands environment and is similar in character, intensity and impact to the following uses:

- Agriculture;
- Agricultural employee housing as an element of and accessory to an active agricultural operation;
- Forestry;
- Recreational facilities, other than amusement parks;
- Agricultural products sales establishments;
- Agricultural processing facilities and other light industrial uses;
- Roadside retail sales and service establishments;
- Resource extraction operations;
- Vegetative waste landfills;
- Public service infrastructure;
- Institutional uses;
- Signs;
- Accessory uses to any of the above.

In Egg Harbor Township the residential use requirement consists of an allocation of 2.5 housing units per developable acre. The number of dwelling units to be accommodated at the base density in this proposed land use plan is about 16,000. In addition, the CMP requires a bonus level of housing capacity equal to fifty percent (50%) of the base housing units with the use of Pinelands Development Credits (PDCs). Applying this bonus percentage to the base level housing capacity results in a total housing capacity requirement of approximately 24,000 dwelling units.

The housing mandate of the CMP can be accommodated within the Regional Growth Area in a variety of ways. The CMP encourages the creation of a variety of zoning districts, each with a distinct range of densities. This approach allows a greater degree of

flexibility in which the Regional Growth Area can be planned to accommodate the required housing capacity while also reserving areas for non-residential uses and open space. An additional benefit is also derived from the opportunity to provide for a range of housing types and to explore the use of planned development as an alternative to conventional development practices. While the CMP suggests that proposed zoning districts utilize these ranges, it does not mean that each range must be recognized in the Township's zoning regulations zoned for Regional Growth Area.

- Less than .5 to .5 dwelling units per acre
- 0.5 to 1 dwelling unit per acre
- 1 to 2 dwelling units per acre
- 2 to 3 dwelling units per acre
- 3 to 4 dwelling units per acre
- 4 to 6 dwelling units per acre
- 6 to 9 dwelling units per acre
- 9 to 11 dwelling units per acre
- 12 and greater dwelling units per acre

Each range starts with a base density which can be achieved "by-right", that is, without the acquisition of Pinelands Development Credits. The higher number represents the maximum density that can be achieved with the acquisition of PDCs. These density ranges may be modified to incorporate local incentive programs by extending the upper end of a density range, however, the extent to which the overall housing capacity is increased must be reasonable and designed not to undercut the viability of the Pinelands Development Credits program.

A final constraint of the CMP relates to non-sewered areas. Residential development within such areas cannot exceed a density of one (1) dwelling unit per 3.2 acres if the use is to be serviced by conventional on-site septic systems. The minimum required lot area may be reduced to on (1.0) acres provided the residential use is serviced by an alternative or innovative wastewater system approved by the Pinelands Commission.

Recommended Distribution and Intensity of Development and Land Use

The Regional Growth Area within Egg Harbor Township encompasses a rather large and diverse area. Subareas and neighborhoods can be distinguished by their existing character, the extent to which they have been previously developed, and by their particular locational setting within the natural environment. The land management policies to be established for the Regional Growth Area must, therefore, be as equally sensitive to existing problems, as to how to best plan for and manage the future physical development of these areas. It is the intention of this Land Use Element to provide management policies which are directed towards both aspects of this concern. To that end, the following objectives have been established to guide the development of appropriate land use policies in the Regional Growth Area of Egg Harbor Township.

1. To provide for the orderly and planned development of land areas through the use of innovative development techniques, which will minimize development's adverse impacts on both the natural resources and man-made environment.

2. To provide incentives within the land use regulatory structure which will enable the realization of certain community-wide goals which include, but are not limited to, the production of new housing at least cost, the extension of necessary municipal services infrastructure into areas of special environmental concern, and the conservation of open space through planned development.

Federal Aviation Administration Technical Center (William J. Hughes Technical Center) / Atlantic City International Airport

A factor which figures prominently in any future development plans is the expansion of both the civil and commercial airport facilities at the Federal Aviation Administration Technical Center and Atlantic City International Airport. Realization of development envisioned will have significant impacts on land use planning in this area of the Township. The influx of hi-tech facilities associated with the anticipated airport expansion will require substantial new housing opportunities and the need for expanded support services.

The prospect of the type of growth projected for the mainland communities necessitates the development of a plan which is detailed enough to address the various issues which may confront the Township while simultaneously being sensitive to changing conditions. Since it is anticipated that Egg Harbor Township will continue to experience significant development pressures for at least the next 10-20 years, it is imperative that provisions for this growth be established in current planning ideologies.

With regard to facilities such as the FAATC, the CMP indicates that,

> "Military and Federal Installation Areas are Federal enclaves within the Pinelands. They represent a unique element of the Pinelands landscape and are a substantial resource to the region and the State, provided that their activities preserve and protect the unique natural, ecological, agricultural, archaeological, historic, scenic, cultural and recreational resources of the Pinelands."
>
> The Federal Aviation Administration Technical Center (FAATC) occupies 3,575 acres in Egg Harbor Township. This facility houses several federal agencies including the US Air Force, NJ Air National Guard, and the US Weather Service. The Atlantic City Air Terminal, also located within the facility, provides for civilian aviation needs in the region. The location of the FAATC facility is indicated in Figure 12-3.

Minimum Standards Governing the Distribution and Intensity of Development and Land Use

The CMP states that, "any use associated with the function of the federal installation may be permitted in a Military and Federal Installation Area, provided that:

1. The use shall not require any development, including public service infrastructure, in the Preservation Area District or in a Forest Area; and

2. All development substantially meets the standards of Article 6 of this Plan (CMP) or an intergovernmental agreement entered into pursuant to Article 4, Part 4 of the CMP (Public Development)."

Additional Considerations

The primary land use consideration for areas adjacent to the FAATC facility is noise generated by aircraft. The runway configurations, shown on Figure 12-3, can be expected to generate average day-night (Ldn) noise levels that may not be compatible with residential development. Table 12-2 compares land use compatibility in various noise exposure zones and is the basis for the suggested zoning district designations and restrictions relative to residential development in areas adjacent to the FAATC.

Given the complexity of issues regarding the Township's position with respect to development pressures exerted by the influences identified above, the utilization of developable lands in the Township must be optimally planned to assure a pattern of orderly growth which is sensitive to the community's existing and prospective social and environmental character.

Table 12-2
Land Use Compatibility in Noise Exposure Zones

Land Use	Compatible Land Use Zones				
	Zone 5 Ldn > 80	Zone 4 Ldn 75-80	Zone 3 Ldn 70-75	Zone 2 Ldn 65-70	Zone 1 Ldn < 65
Residential – Low Density					
Residential – Medium Density, Planned Residential Development					
Residential – High Density, Mobile Homes, Apartments					
Commercial – Retail Intensive: Shopping Centers					
Commercial – Wholesale and Retail Centers					
Commercial – Eating and Drinking Establishments, Hotels and Motels					
Services – Personnel, Business and Professional Offices					
Services - Indoor Recreational, Cultural Activities					
Institutional – Schools, Churches, Hospitals, Nursing Homes					
Institutional – Governmental Services					
Recreational - Playgrounds, Neighborhood Parks					
Recreational – Community and Regional Parks					
Recreational – Golf Course, Riding Stables, Water Recreation					
Recreational – Spectator Sports, Resort and Group Camps, Entertainment Assembly					
Industrial – Manufacturing, Intensive					
Industrial – Manufacturing, Extensive					
Industrial – Petroleum and Chemical Processing					
Agriculture – (Except Livestock), Forestry					
Transportation, Utilities, Quarrying and Fishing Activities					
Wildlife Management, Cemeteries					
Open Space, Water Bodies					

Unacceptable Normally Unacceptable Acceptable

In light of these objectives and in consideration of the minimum standards of the Pinelands CMP, as set forth above, the following land use recommendations for the Regional Growth Area have been established.

Residential Use Zones

Within the growth area five (5) residential use zones are proposed. These zone designations and recommended minimum lot sizes are outlined below:

Table 12-1
Minimum Lot Areas – Pinelands Zones

Zone	Conventional Septic (ac)	Public Sewer (sf)	PDCs (sf)
RG-1	3.2	30,000	17,200
RG-2[a]	3.2	16,000	10,000
RG-3	3.2	10,000	6,700
RG-4	3.2	7,000	2,200[b]
RG-5	3.2	6,500	2,200[b]

[a] Lot sizes may be reduced to 12,000 sf and 7,500 sf when applying the cluster provision of the RG-2 zone.
[b] For single-family attached dwelling units

Non-Residential Use Zones

For purposes of Commercial, Administrative, and Industrial activities, the following zoning districts are recommended:

Zone		Minimum Lot Size
PO-1	(Professional Office)	80,000 sf
NB	(Neighborhood Business)	40,000 sf
CB	(Community Business)	60,000 sf
HB	(Highway Business)	80,000 sf
RCD	(Regional Commercial District)	3 acres
RP	(Recreation Park)	175 acres
M-1	(Light Industrial)	2 acres
GC	(General Commercial)	40,000 sf

D. THE LAND USE PLAN

The Land Use Plan has been prepared on the basis of specific objectives, principles, assumptions, policies and standards, which have been employed as critical to the process of determining a concept for the future growth and physical development of the Township. The Land Use Plan provides the format for developing the appropriate regulations for delineating specific districts and determining those used most compatible with existing development and the natural environment. The Natural Resource Inventory indicates that Egg Harbor Township possesses many unique characteristics which are irreplaceable. To effectively accommodate the development anticipated as a consequence of the Pinelands housing mandate and protect environmental resources shall require constant attention and strong regulation. Therefore, the Township's zoning and land development ordinances must clearly reflect the land use policies contained herein and establish regulations which establish a program for the continued monitoring of development and its effects.

The Land Use Plan includes an analysis of existing land uses with general recommendations for proposed future uses in the identified zone districts. This analysis evaluates the character and locations of the developed and undeveloped areas in the Township. This information provides a comprehensive perspective which enables an evaluation of the existing character of the community and serves as a foundation upon which to shape future decisions and policies regarding the intensity, type and location of development. The basic data derived from this assessment shall help define:

- The composition of development existing in the community, and how this pattern conforms to future development scenarios;

- The spatial location of development and the relationship between various land uses. This analysis identifies the main concentrations of development and their relationship with existing and anticipated growth patterns;

- The amount of land devoted to each major land use, enabling identification of the dominant land use characteristics in a geographic context;

- The amount of developable land which is presently vacant and suitable for development consideration.

<u>General Objectives</u>

1. To encourage municipal action to guide the appropriate use or development of lands within the Township in a manner which will promote the public health, safety, morals and general welfare.

2. To secure safety from fire, flood, panic and other natural and man-made disasters.

3. To provide adequate light, air and open space.

4. To insure that development within the Township does not conflict with the development and general welfare of neighboring municipalities, the County and the State as a whole.

5. To promote the establishment of appropriate population densities and concentrations that will contribute to the well being of persons, neighborhoods and the preservation of the environment.

6. To provide sufficient space in appropriate locations within the Township for agricultural, residential, recreational/open space, commercial and industrial uses.

7. To promote the conservation of open space and valuable natural resources and to prevent urban sprawl and degradation of the environment through improper use of land.

Land Management Policies

1. To encourage a balance of residential, commercial, industrial and agricultural development in areas and at intensities compatible with environmental and natural resource capabilities.

2. To guide single-family residential development into areas which are accessible and either suitable for on-site septic systems or serviced by existing and/or future public sewerage facilities.

3. To recognize existing patterns and densities of development and encourage future growth that is contiguous with existing developed areas and compatible with its established character and consistent with present health and environmental requirements pertaining to on-site septic disposal.

4. To protect and enhance the quality of life and living environment which has been an essential part of the character of the community historically.

5. To consider and evaluate innovative development proposals which would enhance and protect environmental features, minimize energy usage and encourage a creative design that is also consistent with the other policies of the Township.

6. To encourage and protect the continued development of agricultural uses within the Township.

7. To recognize the ecologically sensitive characteristics of the Pinelands and to encourage only those uses which would be compatible with the Comprehensive Management Plan.

Assumptions

1. That the casino industry, development at the FAATC facility and Atlantic City International Airport and retail businesses will continue to affect growth in Egg Harbor Township.

2. That Egg Harbor Township will be able to guide its growth in accordance with the Municipal Land Use Law and will have a major input into any proposed County, State or regional development policies that may affect the Township.

3. That planning for public sewerage facilities over the next five (5) years will provide sufficient capacity to accommodate new growth that is orderly and avoids sprawl, and that expansion of these facilities will be a function of private land development, documented health hazards and policy decisions by State, County and local agencies.

4. That the Township's critical environmental areas will be maintained by governmental legislation affecting growth and development.

Use Inventory

Approximately forty-one (41) percent of the land area within the Regional Growth Area was considered developed in 1993. The developed category includes those areas which have been improved for residential, commercial, industrial or transportation purposes. The present composition of the Township's land usage suggests that thirty-four (34) percent of the developed land is utilized for residential purposes and twenty-four (24) percent has been developed for commerce. Residential development has generally been in the form of small settlements or subdivisions which are situated along the Township's major road network. However, there have been significant major subdivisions approved along West Jersey Avenue, English Creek Avenue, Delaware Avenue and in other areas which are recognized in this plan.

Although developed lands account for a considerable proportion land use in the Township, the majority of lands can be characterized as undeveloped. Of the total area, vacant/developable lands account for approximately 6,500 acres (45 percent). Wetlands, which account for approximately 1,900 acres of the total Regional Growth Area land mass, constitute a significant proportion of this undeveloped land. These hardwood, cedar and pitch pine lowland wetlands, are especially prevalent adjacent to the Patcong Creek and its tributaries.

Although agricultural production areas do not currently comprise a significant aspect of the Township's landscape or economy, they do serve as an important link with historical land use and as reservoirs of open space. Lands currently considered in active agricultural production totaled approximately 1,200 acres in 1987. This figure represents a twenty (20) percent decrease in these agriculturally active lands since 1979. Although the

necessity of these areas for the continued provision of goods within a regional context is debatable, these areas will become increasingly important open space areas as development activities continue. Within the Regional Growth Area, active agricultural areas are most prominent between Mill and Delaware Road adjacent to the Parkway.

The significance of the Township's undeveloped acreage must be recognized and considered in future planning decisions. The Township's heritage and rural character are assets which should be preserved as they serve to reinforce sensitive environmental systems and promote a sense of balance between man and nature. As development pressures continue, efforts to maintain this balance will become more difficult and will depend increasingly upon proper utilization and planning of the vacant, developable uplands and adjacent wetland corridors. These areas, when planned properly, can provide valuable opportunities for open space, preservation of forest areas, wildlife management areas and access to waterways. In some instances, they can also function as transition zones between highly developed and less developed areas.

Commercial activities in the Township can generally be characterized as exhibiting a range of uses including professional and business offices, restaurants, food markets, delicatessens, personal service establishments, and regional and subregional centers such as the Shore Mall and English Creek Center. In an effort to discourage the inefficiencies of strip development, innovative regulations regarding the location and orientation of commercial uses is necessary. Since traffic generation and access are often difficult issues to address, regulations should be considered which encourage limited and/or shared access, and generous landscaping for aesthetic enhancement.

The changing landscape of Egg Harbor Township has been evident during the last decade. Once a rural community, the Township is fast becoming the suburb that was envisioned during the creation of the Pinelands National Reserve. Numerous factors have influenced the metamorphosis in the Township since the Land Use Element was prepared and the Township received Pinelands certification in 1993. Continued development in the Atlantic City casino market, expansion to the FAA Technical Center and Atlantic City Airport, and continued development of retail stores have combined to result in a prodigious increase in employment over the last ten (10) years. These changes along with stringent development regulations in the non-pinelands areas have resulted in an explosion of new home construction and continued population increases.

The Township is struggling to keep pace with this development from a fiscal standpoint while attempting to preserve the same quality of life for its residents. This Land Use Element helps to ease some of the growth pressures by allowing for a general reduction in density in both pinelands and non-pinelands areas along with the creation of additional commercial areas. Besides the fiscal impact associated with the growth, traffic is the major problem affecting the Township. The reduction in density and creation of additional commercial areas will help to both eliminate new vehicle trips and shorten existing vehicle trips to commercial areas. A key factor considered with this Land Use Element is the ability of new residents to access major transportation corridors that lead both to Atlantic City and the major retail centers in Hamilton Township.

I. CHANGES SINCE 1993 LAND USE ELEMENT

Several modifications to the Land Use Plan are accomplished through this Land Use Element. These changes along with the rationale for the changes are included below.

Pinelands Regional Growth Area Changes (Residential)

The most important aspect of this Land Use Element is the reduction in residential density mandated for the Growth area. The proposed amendment to the Pinelands Comprehensive Management Plan that would allow a 30% reduction in mandated density (from 3.5 dwelling units/acre to 2.5 dwellings units/acre for the 1993 undeveloped land) is crucial to the future development of the Township. This Land Use Element allows for the 30% reduction while maintaining a similar scheme to the Regional Growth Area Zoning.

The Regional Growth (RG) zones have been established in a hierarchical fashion with the highest density zones between the Black Horse Pike and the neighboring communities of Hamilton Township and Galloway Township. Lower densities are provided for in the southern end of the Growth Area along Ocean Heights Avenue adjacent to lower growth lands under the jurisdiction of the New Jersey Department of Environmental Protection through the State Development and Redevelopment Plan and CAFRA regulations. Specific changes include the following:

1. Conversion of the RG-2 zone between Dogwood Avenue and Atlas Lane Road to the RG-1 zone.

2. Conversion of the RG-3 zone east of English Creek Avenue between West Jersey Avenue and Ocean Heights Avenue to the RG-1 zone.

3. Conversion of the RG-2 zone south of Mill Road to Ocean Heights Avenue to the RG-1 zone.

4. Conversion of the RG-4 zone between Zion Road and Old Zion Road to the RG-1 zone.

5. Conversion of the RG-3 zone between the Garden State Parkway and Old Zion Road south of Central Avenue to the RG-1 zone.

6. Conversion of the RG-4 zone along Mill Road between Delaware Avenue and Oakland Avenue to the RG-1 and RG-2 zones (RG-1 for the area south of Mill Road and RG-2 for the areas north of Mill Road).

7. Conversion of the RG-4 zone along Ridge Avenue (previously the RG-5 zone) to the RG-2 zone.

8. Conversion of the RG-4 zone along West Jersey Avenue adjacent to the Shore Mall to the RG-2 zone.

9. Modification of the RG-4 zone between Tremont Avenue and Cates Road to the RG-3 zone (proposed RG-3 zone allows the same density as the former RG-4 zone).

10. Density reduction of the RG-4 zone between English Creek Avenue and Hamilton Township (previously the RG-5 zone) to the RG-2 zone.

11. Conversion of a portion of the RG-6 zone between exit 9 of the Atlantic City Expressway and Hamilton Township into the new RG-5 zone.

12. Conversion of a portion of the M-1 Light Industrial Zone adjacent to Westcoat Road located between East Atlantic Avenue and the Garden State Parkway to the RG-5 zone.

13. Establishment of the RG-5 zone created in items 11 and 12. The RG-5 zone allows the greatest density achievable under this plan - five (5) dwelling units/acre base and 7.5 dwelling units/acre with PDC's due to its proximity to the Atlantic City Expressway and Delilah Road. The new RG-5 zone will also allow for several conditional uses including two-family dwellings, single-family attached dwellings, Garden Apartments (as a Conditional Use or Overlay Zone), Planned Adult Communities and Mixed Use Developments in order to allow the greatest flexibility in housing types. The RG-5 zone is designed to encourage a mix of housing types and uses in larger scale developments in order to promote senior housing communities and other affordable housing types.

14. Conversion of a portion of the Recreation Park (RP) Zone to the Restricted Industrial (RI) Zone.

These modifications to the Residential Components of the Growth Area result in the following classifications and general areas as shown in Figure 12-2.

RG-1: Two (2) areas will be located in the RG-1 zone. The first is bounded by English Creek Avenue to the east, Hamilton Township to the west, Ocean Heights Avenue to the south and Atlas Lane Road to the north. The second area lies on the opposite side of English Creek Avenue and is generally bounded by English Creek Avenue to the west, the Garden State Parkway to the east, Ocean Heights Avenue to the south and the RG-2 and RG-3 zones to the north.

The RG-1 zone allows the least amount of density in the Growth Area, at a base density of 1 dwelling units/acre and 1.5 dwelling units/acre with PDC's. This classification is designed to recognize environmentally sensitive areas within the zone and provide for development north of

Ocean Heights Avenue to be consistent with lower density development on the south side of Ocean Heights Avenue.

RG-2: There are also two areas for RG-2 development. The first is bounded by English Creek Avenue to the east, Hamilton Township to the west, West Jersey Avenue to the south and the Tower Avenue Commercial projects (Home Depot, Saturn, etc.) to the north. The second area is generally bounded by English Creek Avenue to the west, the Garden State Parkway to the east, the Highway Business Zone along the Black Horse Pike and the proposed RG-1 zone to the south.

The RG-2 zone allows single-family detached dwellings at a base density of 2 dwelling units/acre and 3 dwellings units/acre with PDC's. This classification is designed to recognize environmentally sensitive areas while allowing the same type housing as the RG-1 zone at a greater density.

RG-3: The RG-3 zone is located generally between West Jersey Avenue and Atlas Lane Road on both sides of English Creek Avenue. It extends to Tremont Avenue on the east and Cates Road on the west and is bisected by the Professional Office Zoning along English Creek Avenue.

Since the proposed RG-3 zone allows the same density as the former RG-4 zone, no change has occurred in this area with the exception of the Professional Office Zoning along English Creek Avenue. The purpose of the RG-3 zoning is to recognize developed areas while allowing infill development with single-family or two-family housing.

RG-4: The RG-4 zone is the former RG-6 zone north of the Highway Business Zone along the Black Horse Pike and south of the Atlantic City Expressway. Portions of the former RG-6 zone have been converted to the RG-5 zone and the Highway Business Zone.

The RG-4 zone allows the second highest density development in the Township at a base density of 4 dwelling units/acre and 6 dwelling units/acre with PDC's. Its purpose is to allow a mix of housing types – single-family detached dwellings, two-family detached dwellings, and garden apartments at a greater density due to its proximity to major transportation corridors and to existing or proposed infrastructure.

RG-5: The RG-5 zone is the conversion of a portion of the former RG-6 zone and M-1 Light Industrial Zone, to create two (2) distinct areas. The first area is located on both sides of the Atlantic City Expressway between exit 9 of the Atlantic City Expressway and Hamilton Township. The second area is located between the Garden State Parkway and Westcoat Road north of East Atlantic Avenue.

The purpose of the RG-5 zone is to allow the greatest mix of housing types at the greatest density permitted in the Township. It also allows for mixed-use developments in larger-scale projects. It promotes flexibility of design and areas for affordable housing. It allows the greatest density in the Township due to its proximity to existing transportation networks and infrastructure.

Pinelands Regional Growth Area Changes (Commercial)

The conversion of a portion of the Light Industrial Zone to the RG-5 Residential Zone resulted in the need to convert some residential areas to commercial areas in order to maintain the same approximate residential land area as the 1993 Land Use Plan. The expansion / creation of commercial zones in the regional growth area are as follows:

1. The Professional Office Zone was extended along the length of English Creek Avenue between the existing PO-2 and PO-1 zones on English Creek Avenue. In addition, all Professional Office Zoning will be modified to a minimum 80,000 square foot lot size from the former 5 acre or 2.5 acre size in order to allow for smaller personal service offices for doctors, dentists, etc. along English Creek Avenue.

   The expansion of the Professional Office Zone is designed to recognize existing professional offices that received use variance approval form the Zoning Board and promote continued development of professional offices along English Creek Avenue.

2. A Neighborhood Business Zone is proposed at the intersection of English Creek Avenue and West Jersey Avenue. The continued residential development in lands surrounding this area along with the improvements to signalize this intersection warrant the introduction of the additional uses permitted under the Neighborhood Business Zone.

3. Expansion of the Community Business Zone is proposed along Ocean Heights Avenue north of the existing Community Business Zone. The purpose is to allow additional commercial development and recognize an existing commercial establishment (Lloyd's Deli) along one of the Township's most traveled streets.

4. Conversion of the Regional Business (RB) Zone in the area of the Shore Mall to the Regional Commercial District (RCD) that existed on the opposite side of the Garden State Parkway. The RB and RCD zones were similar in nature but distinct due to their geographical location on opposite sides of the Parkway. This modification allows for the expansion of the RCD zone while incorporating uses allowed in the RB zone into the RCD zone. It will allow for consistency in the Township's zoning scheme and compatibility of uses in this area.

5. Expansion of the Highway Business (HB) Zoning along the Black Horse Pike is proposed for vacant lands formerly in the RG-6 zone. This modification allows for additional commercial development and provides additional land area needed to promote larger scale commercial projects along the Township's major business corridor.

6. The establishment of a General Commercial (GC) District is provided for the area surrounding the Offshore Commercial Park and former CB zone around the Airport Circle. The GC District will allow for a hybrid of the uses allowed for the Community Business Zone and M-1 Light Industrial Zone. The GC zone will also provide the commercial uses authorized under the mixed-use provision of the RG-5 zone because of its proximity to the proposed RG-5 zones.

Non-Pinelands Areas (Residential)

The explosion in residential development in the Pinelands Regional Growth Area has forced the Township to review densities in both the Pinelands and Non-Pinelands areas. The review of the residential areas outside of the Pinelands has generated the following recommendations:

1. The conversion of the R-4 Residential area between the Atlantic City Expressway and Fire Road / Washington Avenue to a R-2 Residential area. This change will reduce the capacity of the vacant developable land in the existing R-4 zone.

2. Modify the R-4 zone along Old Egg Harbor Road to recognize the existing multi-family developments in this area including London Court, Oxford Village, etc.

Non-Pinelands Areas (Commercial)

An overall goal of this Master Plan is to expand areas for commercial zoning where appropriate while eliminating uses that are no longer appropriate for the suburban community that Egg Harbor Township has become. With this goal in mind, the following modifications are recommended to promote appropriate commercial development in Non-Pinelands areas:

1. Convert a portion of the M-1 Light Industrial Zone along the Black Horse Pike / Old Egg Harbor Road to the Regional Commercial Development (RCD) Zone. Maintain the existing the M-1 zoning for the existing Penn Jersey facility and area immediately surrounding the facility. This change is proposed to eliminate the industrial developments currently allowed in the M-1 zone, but still provides for the commercial development permitted in the RCD zone. The continued development of residential areas that are not compatible with some of the industrial uses permitted in the M-1 zone in this area.

2. An expansion of the Neighborhood Business (NB) zoning district is proposed at the intersection of Ocean Heights Avenue and English Creek Avenue – East along

Ocean Heights Avenue and South along English Creek Road. The introduction of several commercial uses including WaWa, The English Creek Car Wash, and Ocean City Home Bank along with the improvements to realign Mill Road and signalize this intersection warrant the conversion of the southwest corners of the intersection to a commercial zoning district.

3. An expansion of the Community Business (CB) zone is proposed west along Ocean Heights Avenue from the intersection of Ocean Heights Avenue and Zion Road. This expansion will encompass existing non-residential uses (A church and day care facility) and allow for commercial development of vacant lands between Veterans Memorial Park and Ocean Heights Avenue.

4. The conversion of a property (Block 6402, Lot 1) that contains an existing professional office building from the R-3 residential area to the Neighborhood Business (NB) Zoning District.

5. The conversion of a portion of the existing R-4 zone along Hingston Avenue between Old Egg Harbor Road and the existing commercial development along Tilton Road is proposed to a PO-1 (Professional Office) zone. This zoning designation will provide for a low impact commercial zone that will serve to buffer the existing multi-family developments on Old Egg Harbor Road from the retail/commercial development along Fire Road and Tilton Road.

6. The expansion of the Special Highway Development (SHD) Zone is proposed for the south side of the Black Horse Pike in the West Atlantic City portion of the Township along with the elimination of the existing R-5 apartment zone. This modification serves to promote the commercial uses appropriate for this section of the Black Horse Pike as well as preparing for the cooperative effort between the Township and Casino Reinvestment Development Authority for the redevelopment of West Atlantic City.

7. The conversion of the M-1 zone East of the Garden State Parkway from Tilton Road to Mill Road to an RCD zone is proposed. This change is proposed due to the retail development along Fire Road and desire to eliminate new industrial development which would not be compatible with the existing development. The RCD zoning designation will recognize existing commercial development along Fire Road and provide for future development consistent with existing development.

8. The establishment of a Marine Commercial District (MC) at the intersection of Somers Point – Mays Landing Road and Patcong Creek in order to recognize existing marinas in that area.

These changes to the Egg Harbor Township Land Use Element will serve to meet the states goals of a density reduction, growth management, introduction of additional commercial areas, and elimination of uses in certain areas, which are no longer

compatible with the surrounding neighborhoods. It will help to preserve open space areas, limit the number and length of trips on municipal streets, and provide for residential housing at more appropriate densities than is currently allowed under the Pinelands comprehensive management plan.

II. ZONING DESCRIPTIONS

Establishment of the residential districts is based on the Township's desire to locate the majority of the Pinelands-induced growth in the northern areas of the Township near the major transportation corridors such as the Black Horse Pike, Delilah Road, the Atlantic City Expressway and Tilton Road. The less dense districts are in the southern portion of the Pinelands area adjacent to the CAFRA areas.

Residential (Regional Growth Area)

RG-1 – This district is the least dense of the residential regional growth zones and consists of two areas along Ocean Heights Avenue (CR Alt. 559). Densities of 1.0 Dwelling Unit (DU)/Acre and 1.5 DU/Acre with PDCs are recommended in this district. Recommended minimum lot sizes for base and PDC densities are 30,000 square feet and 17,200 square feet, respectively. There were 3,367 acres of undeveloped uplands in this district in 1993. Single-family detached dwellings shall be the only residential unit type permitted in this zone.

RG-2 – This proposed district encompasses 2,576 acres of undeveloped uplands in two areas along English Creek Avenue between West Jersey Avenue and the RG-1 zone. Densities of 2.0 DU / Acre base and 3.0 DU / Acre with PDC's are recommended in this district. Recommended lot sizes are 16,000 square feet and 10,000 square feet, respectively. Due to the significant amount of wetland areas in the RG-2 zone, a cluster provision should be provided. Clustering will be permitted when the amount of wetlands exceeds 20 percent of the gross lot area and will allow for a reduction in lot areas to 12,000 square feet base and 7,500 square feet with Pinelands Development Credits. Single family detached dwellings are the only permitted housing type in the RG-2 zone.

RG-3 – Single-family detached dwellings at a density of 3.0 DU/Acre on lots of at least 10,000 square feet are recommended for this district. Purchase of PDCs will enable an increase in density to 4.5 DU/Acre and a reduction in lot size to 6,700 square feet. This district includes 132 acres of undeveloped uplands, in two separate areas on either side of English Creek Avenue, on the south side of West Jersey Avenue. This zone will allow for single-family detached dwellings and two-family dwellings.

RG-4 – This district encompasses 196 acres of undeveloped uplands in three areas north of the Black Horse Pike. This district is recommended for higher density residential development at 4.0 to 6.0 DU/Acre. The recommended minimum lot area for this district is 7,000 square feet for all single-family detached dwellings.

Utilization of PDCs is permitted as a means to reduce lot sizes for single-family attached and two-family dwellings. Permitted housing types in the RG-4 residential zone will include single-family detached dwellings, two-family dwellings and single-family attached dwellings.

RG-5 – Recommended densities range from 5 to 7.5 DU/Acre depending on PDC use. Lot sizes associated with these densities are 6,500 square feet for single-family dwellings and between 2,200 square feet to 5,000 square feet for two-family or single family attached dwellings. This district includes 639 acres of undeveloped uplands in two areas in the northern portion of the Township. This zone allows for the highest intensity residential development and greatest flexibility of housing types. Permitted / conditional / overlay residential units include single-family detached dwellings, two-family dwellings, single-family attached dwellings and garden apartments. It is recommended that the Township develop an overlay zone for the Garden Apartment provision of the RG-5 zone. The zone will also allow for larger scale developments including planned adult communities and mixed-use developments.

A comparison of the Pinelands areas and mandated residential units for the 1993 Land Use Element and 2002 Land Use Element is shown in Tables 12-3 and 12-4.

Residential (outside of Regional Growth Area)

R-1 – This district is comprised of two areas in the southern portion of the Township, both adjacent to RG-1 zones because of the similar zoning densities. One zone is east of the Parkway between Mill Road and Central Avenue, and the other is south of Ocean Heights Avenue between the rural agricultural (RA) zone and Robert Best Road. Minimum lot size is 40,000 square feet and single-family dwellings are the only permitted housing type.

R-2 – There are two (2) existing zones south of Ocean Heights Avenue. A third zone is proposed in the northeast of the Township that is comprised of an existing R-3 and R-4 zone east of the Parkway and south of the Expressway. Minimum lot size is 30,000 square feet and single-family dwellings are the only permitted housing type.

R-3 – There are four (4) pockets of R-3 zones south of Ocean Heights Avenue, an existing zone east of the Parkway between Ocean Heights Avenue and Central Avenue, and another zone straddling the Expressway on the eastern border of the Township. Minimum lot size is 14,000 square feet and single-family dwellings are the only permitted housing type.

R-4 – There are two (2) zones in the northern portion of the Township along the eastern border – one along Old Tilton Road and one adjacent to both Absecon and Pleasantville. Minimum lot size is 10,000 square feet. Both single-family dwellings and multi-family residential are proposed to be permitted in the R-4 zone.

R-5 – There are two (2) zones in the West Atlantic City section of the Township. Minimum lot size is 6,000 square feet. These higher density zones are located in this area in order to recognize the existing developed areas of West Atlantic City. Single-family dwellings, multi-family residential dwellings and planned unit developments are permitted in the R-5 zone.

R-6 – The Anchorage Poynte and Seaview Harbor neighborhoods are in the R-6 zones. Minimum lot size is 5,000 square feet with single-family dwellings the only permitted housing type.

Business

The Professional Office (PO-1) designation is proposed for three areas along English Creek Avenue between Ocean Heights Avenue and the Atlantic City Expressway. A fourth zone will be located along Hingston Avenue and Old Tilton Road in the northeastern portion of the Township. The PO-1 designation is intended as a means of providing land for a variety of business and office uses, while not impacting an area with an inappropriate volume of traffic or a high intensity land use.

Commercial

The Highway Business (HB) district runs along both sides of the Black Horse Pike from the Hamilton Township border to the intersection with the West Jersey railroad line.

The Neighborhood Business (NB) and Community Business (CB) Zones have been established in certain locations where traffic generation and development have created a need for the services permitted in these zones. There are two NB zones along English Creek Avenue – one at West Jersey Avenue and one at Ocean Heights Avenue. Two other NB zones are located along Steelmanville Road at the intersections of Bargaintown Road and Ocean Heights Avenue. One CB zone is proposed at the intersection of Ocean Heights Avenue and Zion Road.

The Special Highway Development (SHD) district is located along the Black Horse Pike in the West Atlantic City section of the Township. This zone has a minimum lot size of 1.8 acres and allows the same principal uses as the NB zone along with motels and resort recreation uses that are complementary due to its proximity to Atlantic City.

The Regional Commercial Development (RCD) district is located in the northeastern section of the Township along portions of the Garden State Parkway, Fire Road, Tilton Road and the Black Horse Pike. The minimum lot size is three (3) acres. The provision for planned development in the RCD zone has been eliminated in this Land Use Element.

The Marine Commercial (MC) district is comprised of five (5) areas – three (3) in the back bay areas and two (2) adjacent to Patcong Creek. The purpose of this district is to provide and encourage the development of waterfront facilities for recreational purposes and provide public access to the vast waterfront throughout the Township. Minimum lot size is five (5) acres.

The proposed General Commercial (GC) district will be located in the northern part of the Township and be comprised of portions of the existing M-1, CB, HB and RG-6 zones. This zone is located west of the Garden State Parkway, mostly between the Atlantic City Expressway and Delilah Road. Minimum lot size is 40,000 square feet. The GC District is designed to allow various commercial / retail uses while excluding industrial development.

Industrial

The Township's current zoning ordinance identifies two (2) industrial districts distinguishable by the relative intensity and class of use permitted. The existing Light Industrial (M-1) district permits farms, retail and wholesale business in addition to the uses allowed in the more stringent Restricted Industrial (R-I) zone. It was recommended that portions of the M-1 zones in the north and east of the Township be converted to various commercial and residential zones due to the existing nature of development in

these areas and their proximity to major transportation corridors. The remaining M-1 area and the existing Restricted Industrial (R-I) zone should be retained as is with the existing lot size requirements and permitted uses.

The proposed Light Industrial (M-1) zone is comprised of two (2) areas. The first area includes the existing Penn Jersey facility on Fire Road just north of the Black Horse Pike along with some surrounding land. The second area extends from the City of Pleasantville to Hamilton Township in the northeastern side of Egg Harbor Township and includes various existing industrial uses including the FAA Technical Center and Atlantic City Airport.

The existing Restricted Industrial (RI) district remains unchanged. It is located on the south side of Ocean Heights Avenue just east of Zion Road. The RI Zone has also been expanded to include approximately eight (8) acres of land on the north side of Ocean Heights Avenue adjacent to the former landfill.

Other

The Conservation-Recreation-Wetland (CRW) district promotes the preservation of wetland areas along the Great Egg Harbor River and in the back bay areas along the Intracoastal Waterway. The minimum lot size is five (5) acres.

The Rural Agriculture (RA) district is in the southwest corner of the Township adjacent to the CRW zone and south of Ocean Heights Avenue. This zone has a minimum lot size of 2.3 acres.

The Recreation Park (RP) district allows golf courses and commercial and public recreation facilities in an area along Ocean Heights Avenue and Zion Road. Minimum lot size is 175 acres.

The Auto Services Overlay (ASO) is located in the R-1 zone south of Ocean Heights Avenue. This overlay has the same bulk requirements as the R-1 zone and provides for the sales and service of automobiles.

All proposed zoning designations are shown in greater detail on Figure 12-2.

III. PROPOSED PERMITTED USES

NB	**Neighborhood Commercial**
Principal	Restaurants, not including drive-in and quick-food restaurants Professional or business offices; banks Private or public schools, clubs and eleemosynary (charitable) uses Food markets; delicatessens, bakeries; liquor stores Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
Accessory	Uses and buildings customary and incidental to the primary use or building Private garages
Mods & Conditional	Automotive repair and service uses

CB	**Community Business**
Principal	Restaurants, not including drive-in and quick-food restaurants Professional or business offices; banks Private or public schools, clubs and eleemosynary (charitable) uses Food markets; delicatessens, bakeries; liquor stores Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
Accessory	Uses and buildings customary and incidental to the primary use or building Private garages A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal building on the subject premises
Mods & Conditional	Gasoline Filling Stations subject to §225-71

HB	**Highway Business**
Principal	Restaurants, not including drive-in and quick-food restaurants
	Professional or business offices; banks
	Private or public schools, clubs and eleemosynary (charitable) uses
	Food markets; delicatessens, bakeries; liquor stores
	Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores
	Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
	Warehouses and office buildings
	Furniture, furnishings and household appliance stores
	Commercial recreation facilities, including outdoor and indoor theaters, miniature golf and golf driving ranges, batting cages, bowling alleys, indoor soccer, skating rinks and other uses similar to those noted herein
	Funeral homes
	Shopping centers
	Banks chartered under state or federal law, not including drive-in facilities
	Retail sales and retail services
Accessory	Uses and buildings customary and incidental to the principal use or building
	A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal building on the subject premises
Mods & Conditional	Service stations subject to §225-71
	Fast-food restaurants subject to §225-37D(2)
	Arcades subject to §225-37D(3)
	A public garage, new motor sales or leasing agency or used motor vehicle sales agency (provided that it is incidental to the sale of new motor vehicles) subject to §225-37D(4)
	Drive-in banking facilities subject to §225-37D(5)
	A motel or hotel which furnishes sleeping accommodations for tourists or short-term transient guests only; such uses shall not include rental units equipped with cooking or housekeeping facilities subject to §225-37D(6)
SHD	**Special Highway Development**
Principal	Restaurants, not including drive-in and quick-food restaurants
	Professional or business offices; banks
	Private or public schools, clubs and eleemosynary (charitable) uses
	Food markets; delicatessens, bakeries; liquor stores
	Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores

	Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
	Gasoline filling stations
	Motels
	Warehouses and office buildings
	Automotive repair and service uses
	New and used car sales dealers, provided that no outdoor storage for sales vehicles is located closer than twenty-five (25) feet from the street line
	Furniture, furnishings and household appliance stores
	Resort recreation uses, limited to commercial swimming pools, miniature golf and golf driving ranges, campgrounds, bowling alleys and indoor theaters
Accessory	Uses and buildings customary and incidental to the principal use or building
	A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal building on the subject premises
Mods & Conditional	None
RCD	**Regional Commercial Development**
Principal	Offices for business, professional and governmental purposes; banks
	Light industry where the only activity involved is one of the fabricating or the assembling of standardized parts as contrasted to a processing activity which would involve a physical or chemical process that would change the nature and/or character of the product and/or raw material
	The wholesaling or retailing of goods and/or services, including the warehousing or storage of goods
	Scientific or research laboratories devoted to research, design and/or experimentation and processing and fabricating incidental thereto, provided that no materials or finished products shall be manufactured, processed or fabricated on said premises for sale, except such as are incidental to said laboratory activities or are otherwise permitted in this zone
	Restaurants, not including drive-in and quick-food restaurants
	Private or public schools, clubs and eleemosynary (charitable) uses
	Food markets; delicatessens, bakeries; liquor stores
	Personal service establishment limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drugstores
	Business services limited to shops of plumbers, carpenters, electricians, painters or similar tradesman, provided that in these permitted stores or shops, no merchandise shall be carried other than that intended to be sold

	at retail on the premises, and provided that only electric motor power is use for operating any machine used incidental to any permitted use and that in on one store shall more than a five horsepower motor be so employed
	Gasoline filling stations
	Furniture, furnishings and household appliance stores
	A public garage, new motor sales or leasing agency or used motor vehicle sales agency (provided that it is incidental to the sale of new motor vehicles)
	Shopping centers
	Commercial recreation facilities, including outdoor and indoor theaters, miniature golf and golf driving ranges, batting cages, bowling alleys, indoor soccer, skating rinks and other uses similar to those noted herein
	Funeral homes
Accessory	Uses and buildings customary and incidental to the principal use or building
	Outdoor storage of materials incidental to such industrial uses as are permitted above, provided that the areas for such storage and the location and type of fencing used to separate them from other areas and screen them from view from public streets and from other nonindustrial uses as approved by the Planning Board during site plan review
	A single dwelling unit or apartment dwelling unit, provided that the same is physically attached to the principal structure on the lot
Mods & Conditional	Fast-food restaurants subject to §225-37D(2)
	Arcades subject to §225-37D(3)
	Drive-in banks subject to §225-37D(5)

MC	**Marine Commercial**
Permitted	New and used boat sales
	Marinas
	Buildings for the storage, repair and construction of boats, but excluding boats designed and/or used as permanent residential facilities
	Marine supply shops
Accessory	Uses and buildings customary and incidental to the principal use or building, including but not limited to:
	Outdoor winter storage boatyards and buildings for indoor storage of boats
	Retail sales of boating and fishing equipment
	A single-family dwelling or apartment dwelling unit, provided that no more than two (2) such units shall be permitted per lot
	Restaurant to a marina, except that such use shall be limited to 10% of the total floor area of the principal building(s) on the lot or 2,500 square feet of floor area, whichever the lesser
Mods & Conditional	None

M-1	**Light Industrial**
Permitted	Manufacturing of light machinery, such as small machine parts, typewriters, calculators and other office machines
	Fabrication of metal and wood products, such as baby carriages, bicycles, metal foil, metal furniture, musical instruments, sheet metal products and toys, boxes, cabinets and woodworking and furniture
	Fabrication of paper products, such as bags, book binding, boxes and packaging materials, office supplies and toys
	Business offices
	Research laboratories comprising any of the following: biological, chemical, dental, electronic, pharmaceutical and general
	The warehousing and storage of goods
	Other permissible industry, comprising any of the following: brush and broom manufacturing, plastic products, electric light and power and other utility company installations, electronic products, farm machinery, glass products manufacturing, jewelry manufacturing, including gem polishing, leather goods manufacturing (except curing, tanning and finishing of hides), pottery and ceramic products manufacturing and thread and yarn manufacturing
	In addition to the above listed uses, any industrial use not inconsistent with the above may be permitted, subject to §225-40(A)(8)
	Farms, including one single dwelling unit
	Retail services, retail and wholesale sales
	Commercial recreation
	Hotels and conference centers
	Education facilities, including commercial, private and public schools
	Bulk laundry processing
	Auction houses
	Branch banks, including drive-in banking facilities, subject to §225-37D(5)(e)
	Casino gaming equipment assembly, manufacturing, sales and service
	Mail, cargo and freight delivery and distribution facilities
Accessory	Uses and buildings customary and incidental to the principal use or building
	Private garages
	Cafeterias
	Customary and conventional farm accessory uses not otherwise prohibited in this chapter
	Day care when established as an integral component of a principal use permitted in this district
Mods & Conditional	Industrial parks as specified in §225-70
	Vehicle repair subject to §225-37D(4)
	Used auto sales and service subject to §225-37D(4)
	Towing and storage of motor vehicle subject to §225-71.1

R-I	**Restricted Industrial**
Permitted	Manufacturing of light machinery, such as small machine parts, typewriters, calculators and other office machines
	Fabrication of metal and wood products, such as baby carriages, bicycles, metal foil, metal furniture, musical instruments, sheet metal products and toys, boxes, cabinets and woodworking and furniture
	Fabrication of paper products, such as bags, book binding, boxes and packaging materials, office supplies and toys
	Business offices
	Research laboratories comprising any of the following: biological, chemical, dental, electronic, pharmaceutical and general
	The warehousing and storage of goods
Accessory	Uses and buildings customary and incidental to the principal use or building
	Private garages
	Cafeterias
	Customary and conventional farm accessory uses not otherwise prohibited in this chapter
	Day care when established as an integral component of a principal use permitted in this district
Mods & Conditional	Industrial parks as specified in §225-70
	Vehicle repair subject to §225-37D(4)
	Used auto sales and service subject to §225-37D(4)
	Towing and storage of motor vehicle subject to §225-71.1
---	**Auto Services Overlay**
Permitted	Auto body and auto repair
	Wholesale and retail sales of automobiles and auto parts displayed out of doors in accordance with a site plan approved by the Planning Board
GC	**General Commercial**
Permitted	Manufacturing of light machinery, such as small machine parts, typewriters, calculators and other office machines
	Fabrication of metal and wood products, such as baby carriages, bicycles, metal foil, metal furniture, musical instruments, sheet metal products and toys, boxes, cabinets and wood working and furniture
	Fabrication of paper products, such as bags, book binding, boxes and packaging materials, office supplies and toys

	Other permissible manufacturing / fabrication, comprising any of the following: brush and broom manufacturing, electronic products, farm machinery, glass products, pharmaceutical products, photo finishing, pottery and ceramic products and thread and yarn manufacturing. In addition, any manufacturing / fabrication use not inconsistent with the specifically permitted uses are permitted, provided that the use does not produce any hazard from fire or explosion and does not result in any result in the dissemination of dust, smoke, smog, observable gas, fumes or odors or other atmospheric pollution, noise, glare, or vibration beyond the boundaries of the lot on which the creator of the condition is located.
	Research laboratories limited to electronics, pharmaceutical, experimental and testing
	The warehousing and storage of goods including mini-warehouse and self-storage facilities
	Retail services, retail and wholesale sales
	Casino gaming equipment assembly, manufacturing, sales and service
	Mail, cargo and freight delivery and distribution facilities
	Commercial recreation
	Golf Courses
	Hotels, Motels and Conference Centers
	Education facilities, including commercial, private and public schools
	Branch banks, including drive-in banking facilities subject to the special requirements in § 225-37D(5)(e)
	Personal service establishments limited to shoe shops, laundries, barbershops, beauty parlors, hardware shops and drug stores
	Medical, professional and business offices
	Auction Houses
	Restaurants, not including drive-in and quick-food restaurants
	Convenience food stores, food markets, delicatessens, and bakeries
Accessory	Uses and buildings customary and incidental to the principal use or building
	Cafeterias
	Private Garages
	Day care when established as an integral component of a principal use permitted in the district
Mods & Conditional	Industrial parks subject to §225-70
	Gasoline Filling Stations subject to §225-71
	New Auto Sales and used auto sales and vehicle repair incidental thereto subject to §225-37 D(4)
	Fast Food Restaurants subject to §225-37 D(2)

PO-1 Professional Office

Permitted	Offices for business, professional and governmental purposes
	Administrative offices of commercial and industrial partnerships, companies or corporations, subject to §225-42.1A(2)

	Wholesaling, warehousing and distributing, excluding retail or wholesale sale of lumber, ice, coal, petroleum, quarried or mined material or similar bulk materials
	Banks chartered under state or federal law, not including drive-in facilities
	Restaurants, not including fast-food restaurants
	Indoor athletic and recreational facilities
Accessory	Uses and buildings customary and incidental to the primary use or building
	Recreational facilities and cafeterias provided for employees when integrated into a planned office development incidental to the primary office use
	Security watch stations which may contain cooking and sleeping accommodations when integrated and incorporated into the primary building
	Repair facilities for the maintenance of vehicles used in the operation of a primary use
	Storage garages for vehicles used in the operation of the primary use
Mods & Conditional	Office parks subject to §225-70.1

CRW	**Conservation-Recreation-Wetland**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Stables and horse farms
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage
Mods & Conditional	Marinas subject to §225-27D(3) and §225-39

RA	**Rural Agriculture**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Stables and horse farms
	Private schools, museums, nonprofit clubs, fraternal organizations and

	volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage
Mods & Conditional	Marinas subject to §225-27D(3) and §225-39

R-1	**Residential**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garages
Mods & Conditional	Planned adult community

R-2	**Residential**
Principal	Farming and agricultural operations
	Single-family dwellings
	Churches and other similar places of worship
	Golf courses
	Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses
	Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line
	Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
	Private garage
Mods &	

Conditional	None

R-3	**Residential**
Principal	Farming and agricultural operations Single-family dwellings Churches and other similar places of worship Golf courses Private schools, museums, nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses customary and incidental to the principal uses Roadside stands for the sale of produce, primarily raised and produced by the owner of the premises, provided that said roadside stand is located 30 feet from the street line Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes Private garage
Mods & Conditional	None

R-4	**Residential**
Principal	Single-family dwellings Churches and other similar places of worship Nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses and buildings customary and incidental to the principal uses Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office use
Mods & Conditional	Multifamily residential subject to Article IX

R-5	**Residential**
Principal	Single-family dwellings Churches and other similar places of worship Nonprofit clubs, fraternal organizations and volunteer independent fire companies, rescue squads and first-aid squads
Accessory	Uses and buildings customary and incidental to the principal uses Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office use
Mods & Conditional	None

R-6	**Residential**
Principal	Single-family dwellings
Accessory	Uses and buildings customary and incidental to the principal uses Decks, sheds, pools and other structures that are accessory to the principal

building whether attached or detached from the principal building

Mods & Conditional: None

RP — **Recreation Park**

Principal:
- Golf courses
- Commercial recreation
- Municipal parks, playgrounds and other such municipal buildings and uses as are deemed appropriate and necessary by the Township Committee

Accessory:
- Uses and building customary and incidental to the principal use or building

Mods & Conditional: None

RG-1 — **Residential**

Permitted:
- Farming
- Single-family detached dwellings
- Public parks, playgrounds, active and passive recreation

Accessory:
- Uses customary and incidental to the principal uses
- Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes

Mods & Conditional:
- Home occupations subject to §225-44D(1)
- Planned Adult Communities subject to §225-73

RG-2 — **Residential**

Permitted:
- Farming
- Single-family detached dwellings
- Public parks, playgrounds, active and passive recreation

Accessory:
- Uses customary and incidental to the principal uses
- Roadside stands, not larger than 5,000 SF, for the sale of produce primarily raised and produced by the owner of the premises, provided that said roadside stand is located 50 feet from the street line
- Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes

Mods & Conditional:
- Home occupations subject to §225-44D(1)
- Planned Adult Communities subject to §225-73

RG-3 — **Residential**

Permitted:
- Single-family detached dwellings
- Public parks, playgrounds, active and passive recreation

Accessory:
- Uses customary and incidental to the principal uses
- Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes

Mods & Conditional	Home occupations subject to §225-44D(1) Public and private schools, churches, chapels, synagogues or similar houses of worship subject to §225-47D(2) Two-family dwellings subject to §225-47D(3)

RG-4	**Residential**
Permitted	Single-family detached dwellings Public parks, playgrounds, active and passive recreation
Accessory	Uses customary and incidental to the principal uses Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
Mods & Conditional	Home occupations subject to §225-44D(1) Public and private schools, churches, chapels, synagogues or similar houses of worship subject to §225-47D(2) Two-family dwellings subject to §225-47D(3) Single-family attached dwellings subject to §225-48D(2) Planned Adult Communities subject to §225-73

RG-5	**Residential**
Permitted	Single-family detached dwellings Public parks, playgrounds, active and passive recreation
Accessory	Uses customary and incidental to the principal uses Professional home offices, provided that not more than 25% of the gross floor area of the principal building is used for office purposes
Mods & Conditional	Home occupations subject to §225-44D(1) Public and private schools, churches, chapels, synagogues or similar houses of worship, and assisted or independent living facilities subject to §225-47D(2) Two-family dwellings subject to §225-47D(3) Single-family attached dwellings subject to §225-48D(2) Planned adult communities subject to §225-73 Mixed use developments including a mix of the permitted and conditional uses of the RG-5 zone with the permitted uses of the General Commercial (GC) zone

Chapter 13: Relationship of Egg Harbor Township Master Plan to Other Plans

N.J.S.A 40:55D-28(d) of the Municipal Land Use Law requires that a municipal master plan include a specific policy statement indicating the relationship of the proposed development of the municipality provided in the master plan to:

1. The master plans of contiguous municipalities;
2. The master plan of the county in which the municipality is located;
3. The State Development and Redevelopment Plan adopted pursuant to "State Planning Act," sections 1 through 12 of P.L. 1985, c.398; and
4. The District Solid Waste Management Plan pursuant to the provisions of the "Solid Waste Management Act"

In addition, the Egg Harbor Township Master Plan is partially controlled by a regional planning agency. The Pinelands Commission was established in 1979 in accordance with the Pinelands Protection Act and the National Parks and Recreation Act of 1978. The Pinelands Commission is authorized by the Pinelands Protection Act to prepare a Comprehensive Management Plan and to establish development policies and standards to regulate land use. The Pinelands Commission regulates approximately 12,000 acres in Egg Harbor Township along with other lands in Atlantic County, Burlington County, Camden County, Cape May County, Cumberland County, Gloucester County and Ocean County. The total area encompasses 1,082,800 acres with regional growth areas similar to Egg Harbor Township comprising approximately 100,000 acres. The relationship of the Egg Harbor Township Master Plan to the Pinelands Comprehensive Management Plan is also included as a comparison to a regional plan.

1. Master Plans of Contiguous Municipalities

The mainland of Egg Harbor Township is bordered by eight (8) other municipalities in Atlantic County as depicted in Figure 13-1. Many of these municipalities do not directly abut the Township but are separated by a watercourse or other defined land use such as the NAFEC installation / Atlantic City Airport. Due to the physical separation of many of these municipalities and control of the Township's land use by the Pinelands Commission there is little relation between the Township's Master Plan and adjoining municipalities. The following is a review of the relationship of the EHT Master Plan with these municipalities.

Estell Manor –Estell Manor is located to the south of Egg Harbor Township and is separated from the Township by the Great Egg Harbor River. Estell Manor is also under the jurisdiction of the Pinelands Commission but is a low growth preservation area under the Comprehensive Management Plan. It borders the Township's lower growth Rural Agricultural (RA) and Conservation Recreation Wetland (CRW) zones and has areas that permit similar densities to those in the RA and CRW zones. Although the densities permitted in Estell Manor are a fraction of those permitted in Egg Harbor Township's

Regional Growth Area, the densities of development permitted along the Great Egg Harbor River are similar in both communities.

Hamilton Township – Hamilton Township is located to the west of Egg Harbor Township. A portion of Hamilton Township is also in a Pinelands Growth Area so that the growth of Hamilton Township has been similar to that in Egg Harbor Township. Several major transportation corridors run from Egg Harbor Township into Hamilton Township including the Atlantic City Expressway, Black Horse Pike (US Route 40/322), Ocean Heights Avenue (Atl. Co. Route Alt. 559), and Somers Point – Mays Landing Road (Atl. Co. Route 559.) The development along these corridors is seamless so that the projects are substantially the same in both communities.

The Hamilton Township Growth Area is located adjacent to the Egg Harbor Township Growth Area along the Black Horse Pike, Reega Avenue and Dogwood Avenue. Development densities in these areas are similar with both communities mandated for 3.5 base units per acre within the growth area. The development taking place along these borders are similar in densities, types of projects and demographics of residents moving to these communities.

Galloway Township – Galloway Township is separated from Egg Harbor Township by the Atlantic City International Airport / FAA facility and Atlantic City Reservoir. Galloway Township is under growth pressures similar to those in Egg Harbor Township due to its partial designation as a Regional Growth Area and desirable geographic proximity to Atlantic City.

The Pinehurst section of the Galloway Township Growth Area lies on the opposite side of the Airport from the Egg Harbor Township Growth Area. Development in the Pinehurst section of Galloway Township is similar to the growth experienced in Egg Harbor Township. Although Galloway Township was mandated for less density – 2.5 dwelling units per acre versus the 3.5 required in Egg Harbor Township, development in Pinehurst is occurring at a density similar to the RG-5 and RG-6 zones in Egg Harbor Township due to the local zoning for Pinehurst.

Absecon – The City of Absecon borders Egg Harbor Township along the eastern end of the Township along Westcoat Road and Fire Road. The Atlantic County Utilities Authority Environmental Park separates a portion of the Township from Absecon.

Unlike the developing communities of Hamilton Township and Galloway Township, Absecon is an established community with much less development. While the Master Plan of Absecon is not comparable to Egg Harbor Township, the zoning and development regulations for the portion of Egg Harbor Township that borders Absecon are similar to Absecon since this area of Egg Harbor Township is outside of Pinelands jurisdiction.

Pleasantville – The City of Pleasantville borders mainland Egg Harbor Township along its southeastern end to the south of Fire Road. Several major transportation corridors

including the Atlantic City Expressway, Black Horse Pike and Delilah Road run from Egg Harbor Township to Pleasantville on the way to Atlantic City.

Pleasantville is a primarily developed community. There are some areas being developed within the City's Urban Enterprise Zone along with several areas being targeted for redevelopment.

Northfield – Northfield also lies along the southeastern portion of Egg Harbor Township. It is also a developed community with sporadic commercial and residential growth. Tilton Road and Mill Road are major corridors that connect Egg Harbor Township and Northfield. Planning and development of these corridors is comparable in both communities.

Maple Run separates a portion of Northfield from mainland Egg Harbor Township just south of Fire Road. The recreational Birch Grove Park and other agricultural / residential uses lie on the border of Northfield. These uses are similar to uses in Egg Harbor Township.

Linwood – Linwood lies adjacent to Northfield along the southeastern side of Egg Harbor Township. Like Northfield, Linwood is a primarily developed community with limited development potential.

Egg Harbor Township is separated from Linwood by Bargaintown Lake and Patcong Creek. There are limited roadway connections due to the physical separation – only Central Avenue and Poplar Avenue connect these communities. Despite the physical separation, both Master Plans allow for the residential development on either side of Patcong Creek at similar densities.

Somers Point – Somers Point lies along the southern tip of Egg Harbor Township between Linwood and the Great Egg Harbor Bay. Like the adjacent communities, Somers Point has been development with a mix of residential and commercial development. The Garden State Parkway, Ocean Heights Avenue and Somers Point – Mays Landing Road are major corridors that connect Egg Harbor Township with Somers Point.

Patcong Creek also separates Egg Harbor Township from Somers Point on its way to the Great Egg Harbor Bay. Significant environmental constraints around Patcong Creek affect development of both communities between the Parkway and Steelmanville Road. Both communities recognize this area as environmentally sensitive and have provided for little to no growth under their Master Plans.

In addition to the communities that border mainland Egg Harbor Township, several other municipalities border outlying portions of the Township between Somers Point, Linwood, Northfield, Pleasantville and the shore communities of Longport, Margate, Ventnor, Ocean City and Atlantic City. Most of the development in these areas is occurring along

Longport – Somers Point Boulevard, Northfield – Margate Boulevard and the Black Horse Pike in the West Atlantic City portion of Egg Harbor Township. The Master Plans of the shore communities are consistent with the residential and commercial growth in these outlying areas of Egg Harbor Township.

2. ***Atlantic County Master Plan***

Atlantic County prepared a Master Plan dated July 2000. Included as part of the County's Master Plan are demographic trends and projections; existing conditions for nine (9) areas including land use, transportation, solid waste management, wastewater management, water supply; and future plans and proposed improvements for six (6) areas including land use, transportation, water supply, waster management, and natural resources.

The County Master Plan recognizes the impact of the designation of a portion of Egg Harbor Township, Hamilton Township and Galloway Township as Regional Growth Areas. The County Plan provides for the development of these areas and indicates the need for improvements relating to transportation and infrastructure.

3. ***State Development and Redevelopment Plan***

Egg Harbor Township participated in the Cross Acceptance process with the Office of State Planning during the adoption of the new State Development and Redevelopment Plan. The Township detailed areas where they felt centers were appropriate and requested a map change for the West Atlantic City portion of the Township from a Planning Area 5 to a Planning Area 1 in order to recognize redevelopment efforts being coordinated with the Casino Reinvestment Development Authority. Upon approval of these changes, the Egg Harbor Township Master Plan will be consistent with the State Development and Redevelopment Plan. The State Planning areas for Egg Harbor Township associated with the State Development and Redevelopment Plan are shown as Figure 13-2.

4. ***District Solid Waste Management Plan***

Solid waste for the Township is collected by the Egg Harbor Township Public Works Department and disposed of at the Atlantic County Utilities Authority Landfill off of Delilah Road in Egg Harbor Township. By virtue of this coordinated effort between the municipality and county, the Egg Harbor Township Master Plan is consistent with the District Solid Waste Management Plan.

5. ***Coastal Area Facilities Review Act (CAFRA)***

Approximately half of the land area in Egg Harbor Township is under the jurisdiction of the New Jersey Department of Environmental Protection through the environmentally

driven CAFRA regulations. These regulations govern the construction of residential projects with more than 24 units or commercial projects with more than 49 parking spaces. The Egg Harbor Township Master Plan recognizes the regulatory role of the CAFRA rules in order to be consistent with NJDEP requirements.

6. ***Pinelands Comprehensive Management Plan***

As indicated, the Pinelands Commission was created in the late 1970's as a regional planning agency to regulate development within the 1,100,000 acre Pinelands Reserve. It main purpose was the preservation of land and protection of the important Cohansey aquifer from which most of New Jersey's drinking water comes from. Unlike other regional agencies, the Pinelands Commission was given broad power to establish strict land development standards and review all applications for development within the National Reserve. Recognizing that some development must take place within the Pinelands Area, portions of numerous municipalities were designated as Regional Growth Areas – areas that had the existing or proposed infrastructure that would support the anticipated growth.

There is not another piece of legislation that has had such a profound effect on Egg Harbor Township. Within the approximately 6,000 acres of Egg Harbor Township designated as a Regional Growth Area, the Township was forced to provide local zoning to accommodate 5.25 dwellings per acre for a total of 33,000 units. For a community that in 1980 had a population of less than 20,000 people, the additional 75,000 people that could result from the development of the half of the Township in the growth area of the Township was staggering. The Township fought the mandate from the Commission until 1993 but was finally forced to go into Pinelands compliance in 1993 and provide for these additional units when the Commission began approving projects without requiring any local review.

The effects of this legislation will be felt for many years to come. The mandate by the Pinelands Commission has forced the Township to accept too much growth too quickly. The Township struggles with the fiscal impact of this growth along with other problems relating to education, open space, traffic, stormwater, and an overall concern relating to the quality of life for its residents.

The reduction in mandated density accomplished in conjunction with this Master Plan will help to ease some of the problems being experienced. Although the Township does not always agree with the Pinelands Comprehensive Management Plan, this Master Plan is consistent with the Pinelands CMP as was the 1993 Master Plan and Land Use Element.

Chapter 14: Recommendations

Egg Harbor Township has experienced an unprecedented level of growth over the past twenty (20) years. The Township has had a 55 percent increase in population since 1980 with no end in the foreseeable future. Growth in the Township is projected to continue at a consistent pace through the next two (2) decades so that growth management and fiscal stability have become the Township's most pressing concerns.

The proposed Land Use Element (Chapter 12) of this Master Plan will help the Township by providing for a reduction in density mandated by the Pinelands Commission and promoting additional commercial zoning. The recommendations contained in this Chapter of the Master Plan are intended to supplement the proposed land use plan in an effort geared towards growth management, preservation of open space and traffic / transportation concerns.

The following provide some short term and long term goals for the Township to explore until the next Re-Examination report is required in 2008.

1) The Township should continue efforts to prepare a complete Utility Service Element of the Master Plan in order to delineate areas of existing / proposed infrastructure. Proposed areas for future infrastructure installation should take into account the Township's zoning scheme and attempt to provide the appropriate infrastructure in those areas that will experience the most growth. The Utility Service Element has been authorized to be completed and is anticipated by February, 2003.

2) The Township should prepare a complete Circulation Element of the Master Plan in order to delineate existing problem areas and prepare for future improvements. The traffic in the Township has been increasing exponentially over the last several years due to continued development in Egg Harbor Township and the growth areas of Hamilton Township and Galloway Township. In conjunction with the Circulation Element, the Township should prepare the necessary Capital Improvement Program so that off tract contributions can be required of developers during the Planning Board process. The Circulation Element has been authorized to be completed and is anticipated by February, 2003.

3) The Township should explore the possibility of providing a direct access from the Garden State Parkway to the Shore Mall. The existing traffic patterns in and around the Shore Mall contribute to extreme congestion along the Black Horse Pike and Tilton Road in this area. A direct access to the mall will limit the trips on the adjacent roadways and ease some of the congestion in the area. In addition, the ability to easily access the Shore Mall from the Parkway will help the development of the mall into a regional business center.

4) The Township should continue to assist the owners of the Shore Mall with the traffic signal proposed on the Black Horse Pike at the entrance to the mall. This signal is long overdue to control the traffic utilizing the Black Horse Pike and entering and exiting the mall.

5) The Township should consider providing a connection between West Jersey Avenue and Reega Avenue along Fernwood Avenue. The existing Middle School and signal at Fernwood Avenue and the Black Horse Pike warrant a transportation corridor along Fernwood Avenue through the railroad bed.

6) The Township should continue to request that the New Jersey Department of Transportation provide a long-term plan to provide for the elimination of the existing unsafe cut-throughs on the Black Horse Pike.

7) The Township should continue to request that Atlantic County assume ownership and maintenance of those roadways that no longer should be municipal streets due to geography or traffic volumes. These roads include Doughty Road from the City of Pleasantville to Delilah Road, Hingston Avenue from Old Egg Harbor Road to Fire Road and West Jersey Avenue from the Shore Mall to Hamilton Township.

8) The Township must continue to explore transportation and intersection improvements at various locations throughout the Township. The intersections of Fire Road and Mill Road, Spruce Avenue and Mill Road, Mill Avenue and Ridge Avenue, English Creek Avenue and Dogwood Avenue, Fire Road and Hingston Avenue, Ocean Heights and Leap Street, and Bargaintown Road / Steelmanville Road/ Poplar Avenue have already exhibited some level of capacity problems and will need improvements. Other problem areas will be detailed in the Circulation Element of the Master Plan.

9) The Township should aggressively continue their efforts towards open space acquisition. Land is being developed so rapidly that acquisition has become extremely difficult and expensive so the Township must continue efforts with all available means of funding.

10) The Township should continue to pursue the proposed Timed Growth Legislation. This legislation will provide for a phasing of growth or capital contributions from developers and could be an important component of the Township's continued development.

11) The Township should develop a new Zoning Ordinance (Chapter 225) in order to incorporate some of the recommendations of the Land Use Element and clean up existing conflicts and ambiguities within the zoning ordinance.

12) The Township should revise the Design and Performance Standards (Chapter 94) in order to make the ordinance compatible with decisions / changes the Planning

Board has been authorizing during the approval process. The Township should eliminate provisions in the ordinance that generate repeated design waivers granted by the Planning Board and update certain design standards.

13) The Township should consider the implementation of the proposed River Conservation (RC) zone overlay contemplated in the River Management Plan in order to provide greater protection for the Great Egg Harbor River and its tributaries.

14) The Township should continue to work with the Environmental Commission on the established of a green beltway and trail network that will allow for non-motorized methods of transportation throughout the Township.

15) The Township should continue efforts to work with the Egg Harbor Township Board of Education on the siting of new schools and expansion to existing schools. The 56 million-bond referendum recently authorized for improvements to existing schools and a new intermediate school is just the beginning of the necessary building program by the Board of Education.

16) The Township should continue to monitor the expansion of the FAA Technical Facility and Atlantic City Airport in order to provide opportunities for development around the Airport Circle that will be necessary for the continued operation of the facility.

17) The Township should explore the feasibility of a regional stormwater plan for the area along English Creek Avenue in the DeCarlo tract watershed. This regional plan could help to ease some of the existing problems experienced in stormwater basins in the English Creek area and provide a mechanism for the elimination of some of the malfunctioning basins in the area.

18) The Township should pursue funding through the Federal Emergency Management Act and Flood Mitigation Plan to ease some of the problems experienced in West Atlantic City.

19) The Township should continue the cooperative effort undertaken with the Casino Reinvestment Development Authority for the redevelopment of West Atlantic City.

20) The Township should continue to work with the Economic Development Commission in order to create an atmosphere within the municipality which is conducive toward the retention of existing businesses and the attraction of new businesses within the appropriate zoning districts.

The Township should explore methods and policies which will enable its commercial and industrial districts to be more competitive with the challenge and benefits presented by enterprise zones in other municipalities.

21) The Township should develop a sub-committee made up of members of the Planning Board, Governing Body and Township residents to study the intersection of Bargaintown Road, Steelmanville Road and Poplar Avenue in an effort to create the most appropriate zoning for this intersection. Although a change in zoning is not part of this Master Plan, the Township should remain committed to the improvements necessary to upgrade this intersection along with developing a zoning scheme that is compatible with the surrounding residential community and existing non-conforming businesses in this area.

Chapter 11: Recreation / Open Space Element

A. INTRODUCTION

In 1993, the Township adopted an Open Space and Recreation Plan. This plan included the unique and natural resources in the Township; a list of goals, objectives, and assumptions for open space and recreational needs within the Township; an inventory of existing and proposed municipal parks and recreation areas; municipal recreational amenities; county parks and open space; a description of the National Wild and Scenic Rivers system; and a recommendation and implementation strategy. This Recreation / Open Space Element includes relevant portions from the 1993 Open Space and Recreation Plan, revisions that account for changes in planned improvements or existing facilities, and a "needs assessment" based on current recreation trends and population projections for the Township.

In New Jersey most of the recreation facilities are traditionally provided by county and municipal agencies. The responsibility for acquiring, developing, and maintaining regional parks recreation areas is typically handled by the County government. Neighborhood and local recreational facilities are often planned, constructed and maintained by the municipality.

A majority of local governing bodies in New Jersey have used grants and funding made available through the NJDEP Green Acres Program to acquire parks and open space since 1961. The Green Acres program matches local contributions and provides fifty percent (50%) of the funding for purchases. Local park development was primarily funded through the Land and Water Conservation Fund of 1965, a federal program.

In 1974, the Green Acres program was revised. One of the most significant changes permitted bond money to be used for the development of local recreation facilities. Urban counties and municipalities are now able to combine funding from Green Acres and the Land and Water Funds programs to finance up to ninety percent (90%) of the cost of a development project.

In November 1998, the residents of New Jersey overwhelmingly approved a dedicated open space tax to provide a trust fund for the purposes of open space preservation. Programs that receive funding include historic preservation projects, farmland acquisition, general open space preservation, and park development. This effort is part of a campaign by the Governor to preserve one million (1,000,000) acres of land throughout New Jersey. More than $90 million was allocated by the New Jersey Legislature in the 2000 fiscal year budget for these preservation projects.

Municipalities are also permitted to set aside portions of their land to accommodate recreational uses or open space, as authorized in the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq. Egg Harbor Township has exercised this option and designated one area in the Township as "Recreation Park". This zoning district is approximately 190

acres and is located to the southeast of the intersection of Zion Road and Ocean Heights Avenue. Only golf courses, commercial recreation uses, municipal parks, playgrounds and municipal buildings are permitted in this zoning district.

In 2001, Township voters passed a referendum to create a tax rate in the amount of $0.02 per $100 of assessed property value for an open space fund that will be used for preservation, acquisition, recreational development, and capital maintenance of land dedicated to open space use. The open space fund may only be used for purposes which benefit the public and will be administered by the Township Committee.

B. GOALS & OBJECTIVES

The purpose of this Recreation / Open Space Element is to build upon existing information and develop a comprehensive plan for recreation and open space for the residents of Egg Harbor Township. In addition to meeting the requirements for a recreation plan as noted in the Municipal Land Use Law (N.J.S.A. 40:55d-28.b(7)), this Element will also identify unique environments and natural resources for which specific management policies should be established. This plan will also serve as a guidance document for the acquisition and improvement of open space and recreation areas in the Township.

The primary goal of this Recreation / Open Space Element is to provide information and direction on open space and recreation for municipal officials which will lead to sound decisions concerning:

1. Improvement of recreational opportunities in terms of quantity, quality, and variety to meet the existing and future needs of residents;

2. Protection of adequate amounts of open space for current and future use, and preservation of the natural and cultural resources necessary to maintain and enhance the quality of life in the Township;

3. Optimum use of the recreation potential of open space lands consistent with local natural and cultural resource management and protection goals;

4. Effective and efficient use of Green Acres bond monies and other funds available for outdoor recreation and open space projects; and

5. Coordination of local recreation and open space planning projects with planning programs at other governmental levels to achieve mutual goals.

The specific objectives of this Element are:

1. To present accurate, up-to-date information on the supply of and demand for outdoor recreation facilities and open space resources;

2. To discuss alternative strategies for addressing open space and recreation deficiencies and to establish a mechanism by which recreation needs of future residents can be met;

3. To recommend and define policies and priorities affecting recreational development and open space acquisition in the Township; and

4. To link open space together, where possible, to provide a comprehensive trail network with walkways and bike paths throughout the Township.

C. INVENTORY OF EXISTING RECREATION FACILITIES

1. Atlantic County

The Atlantic County Open Space and Recreation Plan (October 2000) was reviewed during the preparation of this Recreation / Open Space Element to ensure that the Township and County share a common vision for present and future recreation needs within the Township.

As stated previously, New Jersey approved a dedicated source of funding for open space preservation and park development. Atlantic County has acquired approximately 1,200 acres of land in Egg Harbor Township (Table 11-1) using this funding. Existing recreation facilities in Egg Harbor Township are shown in Figure 11-1.

Table 11-1
County Land in Egg Harbor Township
Acquired through Dedicated Open Space Tax

Site	Acres
Powell Creek	124
River Bend Park	650
Interdevelco	25
Greentree Golf Course	241
Nathanson Property	157
Total	***1197***

Source: *Atlantic County Open Space and Recreation Plan*, October, 2000.

In addition to the above properties, the County also owns two (2) other recreation / open space sites in the Township. The County has retained portions of the old wooden bridge on Somers Point-Longport Boulevard for use as a fishing pier and has constructed a boat access ramp along the northern side of the bridge abutment. The County is in the process of converting the abandoned Western Seashore Line along West Jersey Avenue into a bike trail. Phase I of this project included the area between the Shore Mall and the Hamilton Township border.

2. Municipal Facilities

The Egg Harbor Township Department of Parks and Recreation sponsors activities such as soccer, fencing, dance, football, flag football, tennis, karate, basketball, arts and crafts, street hockey, wrestling, swimming, and aquatics. The Township owns sixteen (16) facilities throughout the Township including Veteran's Memorial Park, Childs-Kirk Memorial Park, Delilah Oaks Park, M.K. Betterment Park, Oakland/Tremont Park, the Cygnus Creative Arts Center, the Environmental Learning Center, Tony Canale Park, Shires Park, Ridge Avenue Ready-to-Ride Facility, Tilton Road Center, Temple Tract, Castle Park, Spruce & Ninth Avenues, the Delaware Avenue Tract, and the Tobaben Tract, as indicated in Figure 11-1. The amenities contained at each location are listed below in Table 11-2. Tony Canale Park, Childs-Kirk Park, M.K. Betterment Park, and Spruce & Ninth Avenues are being targeted for expansion.

Table 11-2
Recreational Amenities at Parks throughout the Township
Egg Harbor Township, Atlantic County, New Jersey

Park Site	Softball/Baseball Fields	Little League Fields	Soccer Fields	Paddle Tennis Courts	Field Hockey Fields	Basketball Courts	Volleyball Courts	Football Fields	Tennis Courts	Trails	Swimming Pools	Running Track (¼ Mile)	Multipurpose Fields	Playground	Passive Parks
Veterans Memorial Park	11	1[1]			3[2]			1	2	1[3]					
Childs-Kirk Memorial Park	4		2											1	
Delilah Oaks Park						1			1			1[4]	1	1	
M.K. Betterment Park						1	1							1	
Oakland/Tremont Park						1									
Environmental Learning Ctr.															1
Tony Canale Park	1						4		2	1			4	1	
Shires Park	1					1							1	1	
Ridge Ave. Ready-to-Ride										1[5]					
Tilton Road Center															
Temple Tract															1
Castle Park														1	
Spruce & Ninth															1
Total	***17***	***1***	***2***		***3***	***4***	***5***	***1***	***5***	***3***		***1***	***6***	***6***	***3***

[1] Babe Ruth League
[2] Street Hockey
[3] BMX Bike Trail
[4] Exercise Track
[5] Offroad Motorcycle Trail

As evidenced in Table 11-2, the municipal parks throughout the Township have the ability to offer a variety of recreational programs and activities to residents of all ages. The three (3) major municipal recreation centers in the Township are Veterans Memorial Park, Tony Canale Park and Childs-Kirk Memorial Park. These sites

include a refreshment stand (Veterans Park), a field house / bathroom facilities (Childs-Kirk Park), and an outdoor amphitheater / bathroom facilities (Canale Park).

Additional recreation and community service facilities can be found at the John Couchoud Community Center. This community center is located on a 9.5-acre site on English Creek Avenue. It is used as a meeting place for various civic groups, as a nutrition site by the Atlantic County Department of Human Services, and by the Township Recreation Department for different programs and activities. Other recreational amenities include a bocce ball court, miniature golf course, horseshoe pit and picnic area.

The Township has also initiated development of an Environmental Learning Center (ELC). This 13.6-acre site is located on School House Lane. The Township had previously used this site as a gravel pit. Since the ELC has been established, litter has been removed from the site and a field laboratory for the study of successional re-vegetation has been established.

The Egg Harbor Township Police Athletic League (PAL) operates several of the municipal facilities as indicated below:

M.K. Betterment – PAL purchased the M.K. Betterment Association in 2001. Work is ongoing to refurbish the building and restore the youth related activities at the site. It is anticipated that the EHT PAL will partner with the Township in order to continue youth programs at the facility.

Ridge Avenue – PAL operates its Ready-to-Ride program on the site of an abandoned gravel pit. The site includes trails utilized for motorcycles and ATVs along with a training / community center.

Tilton Road Center – PAL operates a community center out of a building previously used by the Sixth District Rescue Squad. The facility is used for meeting space, dance programs, and motorcycle / ATV training.

The Temple tract is a 152-acre site located on Zion Road. This parcel was purchased in 2001 with the assistance of the Green Acres Program and Atlantic County and will be used for passive recreation.

The Egg Harbor Township Community Playground, Inc., was a non-profit group organized in 1992 to develop a community playground. This group designed and constructed a playground - Castle Park - adjacent to Veterans Memorial Park off of Ocean Heights Avenue. This playground is unique not only because of its design, but also because of the sense of community fostered in the volunteers involved in this planning effort.

Recent municipal acquisitions include:

- **Delaware Avenue Tract –** Located on Delaware Avenue between Ridge Avenue and Fernwood Avenue, this tract was donated to the Township as a recreation component for several major subdivisions. The Township anticipates this land will be used for active recreation.

- **Tobaben Tract –** This tract is located between Zion Road and Leap Street between two (2) recently approved major subdivisions. It was acquired due to the tremendous amount of growth in the area and the need to preserve open space and provide recreation. This site is adjacent to Naame Tract and Bohle Farm, both future acquisitions, and will be used for horse trails.

3. Egg Harbor Township Board of Education

NJDEP issued a report entitled *Outdoor Recreation Plan of New Jersey* ("Outdoor Recreation Plan") in November 1984. The Outdoor Recreation Plan stated that the public school districts in New Jersey controlled over 12,000 acres of recreation land and facilities. Most of the stadiums, gymnasiums, and running tracks; many of the ball fields, outdoor basketball courts, and tennis courts; and some of the nature centers, picnic areas, pools and trails contained in these lands were owned by the public school systems.

Schools provide the only public recreation available to residents in some municipalities. Policies for public access to these facilities vary with each individual school board. NJDEP's policy on public access to these educational recreation facilities is very clear. This agency encourages the construction of recreation facilities adjacent to schools and awards Green Acres grants to municipalities who develop "joint-use" or multi-use facilities providing they will be available to the general public on a daily basis.

As previously noted, the Egg Harbor Township Board of Education (EHTBOE) plays a significant role in providing open space and recreation opportunities in the community. The Township currently has seven (7) public schools – one high school, one junior high school, one intermediate school, and four (4) elementary schools. Table 11-3 lists each public school in the Township, the amount of land at each school, and the recreational amenities at each school.

Table 11-3
Recreational Amenities at Public Schools throughout the Township
Egg Harbor Township, Atlantic County, New Jersey

School Location	Area (Acres)	Softball/Baseball Fields	Little League Fields	Soccer Fields	Paddle Tennis Courts	Field Hockey Fields	Basketball Courts	Volleyball Courts	Football Fields	Tennis Courts	Trails	Swimming Pools	Running Track (¼ Mile)	Multipurpose Fields	Playground
EHT High School	76	3		1		1			1	5		1	1		
EHT Middle School	29	2		1			3			8					
EHT Intermediate School	44	2					2							1	
EHT Elementary School*	32														
Davenport School	23	1												1	1
Slaybaugh School	51	2		1			3								1
Swift School	52	1												1	
Total	***307***	***11***		***3***		***1***	***8***		***1***	***13***		***1***	***1***	***3***	***2***

*Opened in 2003. Will share Intermediate School facilities until new ones are constructed onsite.

4. Other Facilities

Cygnus Creative Arts Centre - The Cygnus Creative Arts Centre is a 5.4-acre site that is located on English Creek Avenue, adjacent to the John Couchoud Civic Center. This site is the former location of McKee City School No. 6. It is operated by a not-for-profit agency.

Private Developers - Private developers also play an important role in providing recreational facilities throughout the Township. Commercial recreation facilities available in the Township include:

- **King Pin Lanes** - Bowling alley and ice hockey rink, located on the Black Horse Pike in the Cardiff section of the Township.
- **Golf and Tennis World** - Racquetball / tennis courts and driving range, located on the Black Horse Pike in West Atlantic City.
- **Tilton Athletic Club** – Multipurpose fitness center located on Tilton Road and Hingston Avenue.
- **Parkway Skating Center** - A 24,000 square feet roller skating rink, located on Fire Road.
- **Storybook Land** – 20-acre amusement park, located on the Black Horse Pike.
- **Harbor Pines Golf Club** – Public 18-hole golf course, located on Ocean Heights Avenue and Steelmanville Road.
- **Egg Harbor River Resort Campground** - Approximately 33 acres with 124 campsites and hook-ups available for water, electric, and television, located on Thompson Lane.

- **Colonial Meadows Campground** - Approximately 55-acre site, located on Mays Landing-Somers Point Road and Lees Lane.
- **Sleepy Hollow Campground** - Approximately 30-acre site, located just north of Bevis Mill Road.
- **Bob Thatcher's Family Golf** – A driving range and a pitch and putt golf course that opened in 2002.
- **Ballamor Golf Club** – Private 18-hole golf course that opened in 2001, located on English Creek Avenue between Ocean Heights Avenue and Zion Road.
- **Twisted Dune** – Public 18-hole golf course that opened in 2001, located on Ocean Heights Avenue between Swift Drive and Barnett Avenue.
- **McCullough's Emerald Golf Links** – Public 18-hole golf course that opened in 2002, located on Ocean Heights Avenue at a former landfill. The landfill was closed in August 1990 and the golf course is part of the "capping and remediation" plan.
- **Hidden Creek Golf Course** (formerly known as Miry Run) – Private 27-hole golf course (18 holes completed to date) that opened in 2002, located on a 750-acre site on Asbury Road.

D. NEEDS ANALYSIS BASED ON CURRENT POPULATION AND POPULATION PROJECTIONS

The interaction of recreational supply and demand defines the open space and recreation needs of an area and individual municipalities in the area. The demand for outdoor recreation is influenced by many factors including population growth and socio-economic characteristics. Residents and visitors typically desire a diverse selection of recreational opportunities ranging from active sports - hiking and bicycling - to passive recreation and open space opportunities such as camping and horseback riding.

The magnitude and diversity of a municipality's recreation demand can present a challenge to those involved in providing recreation amenities or planning for future facilities. The industry standard among planners and recreation authorities for recreation areas is listed in Table 11-4, which includes the recommended and actual numbers of individual recreation amenities.

As noted in Table 11-4, the Township appears to have a current and/or projected deficiency in the following recreational facilities:

- Volleyball courts – one (1) court current, four (4) courts projected
- Tennis courts – three (3) courts projected
- Swimming pools – one pool both current and projected
- Ice arenas – one arena both current and projected

The Township has nine (9) existing multi-purpose fields, including four (4) at Tony Canale Park. These multi-purpose fields are used for a variety of activities including soccer, softball, baseball, little league, field hockey and football. Based on the large

number of existing multi-purpose fields, it can be assumed that the deficiency for little league fields is actually eliminated.

Table 11-4
General Standards for Recreational Facilities
Based on 2000 Population and 2010 Population Projection
Egg Harbor Township, Atlantic County, New Jersey

Recreational Amenity	National Recreation and Park Standard	2000			2010**		
		Facilities in Twp.	Min. No.	Surplus/ Shortage	Facilities in Twp.	Min. No.	Surplus/ Shortage
Softball Fields	1/5,000 residents	28	6	16	28	9	10
Baseball Fields	1/5,000 residents		6			9	
Soccer Fields	1/10,000 residents	5	3	2	5	5	---
Field Hockey Fields	1/20,000 residents	4	2	2	4	2	2
Multi-Purpose Fields	No standards published	9	---	9	9	---	9
Basketball Courts	1/5,000 residents	12	6	6	12	9	3
Volleyball Courts	1/5,000 residents	5	6	(1)	5	9	(4)
Football Fields	1/20,000 residents	2	2	---	2	2	---
Tennis Courts	1/2,000 residents	18	15	3	20	23	(3)
Trails	1 system per region	1	1	---	1	1	---
Swimming Pools	1/20,000 residents	1	2	(1)	1	2	(1)
Running Track (¼ Mile)	1/20,000 residents	2	2	---	2	2	---
Community Centers	1/25,000 residents	2	1	1	2	2	---
Ice Arena	1/20,000 residents*	1	2	(1)	1	2	(1)
Outdoor Theater	1 per region*	1	1	---	1	1	---
Camping Areas	1 ac. /5,000 residents*	243 ac.	6 ac.	237 ac.	243 ac.	9 ac.	234 ac.
Regulation Golf Courses	1/50,000 residents*	6	1	5	7	1	6

Source: *The New Illustrated Book of Development Definitions*, 1997, page 219.
* Source: *Planning Design Criteria*, 1969, pages 224-225.
** Based on projected population of 45,000

Despite the surplus shown for most of the amenities above, the Township has experienced a shortage of many facilities including soccer and baseball / softball fields. This is partly because the fields owned by the Board of Education are used exclusively by school teams.

E. FUTURE ACQUISITIONS / PLANNED IMPROVEMENTS

1. Atlantic County

In addition to the sites currently owned and operated by the County, several other candidate sites in the Township have been identified for future acquisition. These sites include Malibu Beach, Central North Park, Central South Park, Bike Path East, the Egg Harbor / Northfield Mini Park, the Tony Canale Park Expansion, South Park, the DeCarlo Tract, and the Water Park at the Federal Aviation Administration facility.

Each of these sites is prioritized in the County's Open Space and Recreation Plan. There are four (4) different priority levels. Level 1 Priority indicates that the site is presently under development pressure and is in a "high risk" area in terms of being

lost for open space and preservation considerations. Level 2 Priority delineates sites that are under consideration for use as an educational, historical, and/or cultural resource site. Living farms are typical examples of Level 2 sites. Level 3 Priority sites are locations that have environmental constraints limiting development potential, but afford an excellent opportunity for passive recreation uses. These areas are predominately identified as conservation areas and will help preserve the County's resources. Level 4 Priority sites are largely publicly owned parcels or areas that require additional study to determine suitability for active or passive recreation use. The sites that are under consideration by the County are described below and listed in order of their Priority Level ranking.

Level 1 – Atlantic County Department of Parks and Recreation has identified six (6) sites located in Egg Harbor Township. The sites are listed by name, acreage and County resource assessment classification in Table 11-5.

Table 11-5
County Priority Level 1 Sites
Egg Harbor Township, Atlantic County, New Jersey

Name	Acres	Resource Assessment Classification
Bike Path East	140	Linear - Active
Central North Park	274	Active
Central South Park	265	Active
Tony Canale Park Expansion	75	Local - Active
Waterfront Access (Malibu Beach)	40	Water
Egg Harbor / Northfield Mini Park	50	Conservation
Total	***844***	

Source: Draft *Atlantic County Open Space and Recreation Plan*, July 1999, Table 9.

As noted in Table 11-5, the County plans to expand or create nearly 850 acres of new open space / park / recreation lands in Egg Harbor Township alone.

Level 2 – None in Egg Harbor Township.

Level 3 – Two (2) sites are identified in Atlantic County. One of these sites – South Park – is located in Egg Harbor Township. This 155-acre site is identified as a conservation resource assessment.

Level 4 – Two (2) sites identified by the County are located in Egg Harbor Township. The DeCarlo Tract is a 240-acre site located off of English Creek Avenue. The second site in the Township is the 70-acre Water Park at the Federal Aviation Administration Technical Center.

One of the most significant of these sites is Malibu Beach, which is located on Somers Point-Longport Boulevard. This site includes 40 acres of waterfront access and an additional 260 acres of coastal wetland and upland areas. These

areas are important to resident and migrating shorebirds and waterfowl. The State Green Acres program has targeted this area for acquisition due to its ecological significance. The US Fish and Wildlife Service has also recommended this area for preservation as a "Critical Habitat" for the Piping Plover. It is further identified by the international Shorebird Survey as one of the twenty (20) most important migratory stops east of the Rocky Mountains for shorebirds. Acquisition of this site will provide additional areas for public access to the Great Egg Harbor Inlet and offer opportunities for environmental education.

2. Municipal

As part of the Township municipal open space fund, a listing of open space acquisition areas has been developed. The exorbitant land values attributed to the demand for land in the Township has made open space acquisition difficult, but the Township is committed to purchasing as much open space as possible. The Township has created an open space committee, comprised of two (2) members of the Township Committee, the Township Administrator, the Deputy Administrator, and the Township Engineer. This committee is charged with identifying areas for open space acquisition, and has developed the following list of parcels (shown in Figure 11-1) for open space in the Township:

- **Broadway Tract** – Just west of the Shore Mall, the Broadway Tract is an area targeted for a future high school along with conservation due to the large amount of environmentally sensitive land. Generally, it is bounded by Broadway Avenue to the East, Spruce Avenue to the west, West Jersey Avenue to the north and Ninth Avenue to the south.
- **Fernwood Tract** – Located off of Fernwood Avenue, the Fernwood Tract is an area of existing undersized lots on paper streets (Avenues A, B & C) just north of Reega Avenue. This property is planned to be used as passive open space.
- **DeCarlo Tract** – East of English Creek Avenue, this site is targeted for conservation due to its environmental sensitivity and may be used as a regional stormwater management area. Also on Atlantic County's list for possible open space acquisition.
- **Alder Avenue** – The Alder Avenue site is located between the existing Intermediate and Elementary Schools. This site could be used for school expansion or development of active recreation.
- **Atlas Lane** – The Atlas Lane acquisition is an approximately twenty (20) acre area adjacent to M.K. Betterment Park.
- **High School Area** – The Township is considering a potential land swap to obtain a twenty-five (25) acre parcel adjacent to the high school. This property could be used for an expansion to the high school along with recreational fields.
- **Bayberry Tract** – This tract is located off of Ocean Heights Avenue in an area with numerous paper streets between Ocean Heights Avenue and Bayberry Avenue.
- **Naame Tract** – This tract is located on Leap Street between Ridge Avenue and Bayberry Road. This twenty-five (25) acre tract is in the center of a fast

developing area and will be used for open space / possible equestrian center. Currently under agreement.

- **Crimi Tract** – Adjacent to the Temple Tract, the Crimi Tract is a former gravel pit that the Township may acquire for an expansion of the passive recreation proposed for the Temple Tract.
- **Reed Farm** – Near the Elementary School, the 20-acre Reed Farm may be used for soccer fields.
- **Bohle Farm** – This 22-acre site is adjacent to the recently acquired Tobaben Farm and may be used for additional horse trails.
- **Mays Landing-Somers Point Road** – Located on the north side of Mays Landing-Somers Point Road, this tract is in an area between Green Tree Golf Course and River Bend Park and will be used as passive open space.
- **Malibu Beach** – This parcel includes 40 acres of beachfront property on the Great Egg Harbor Bay and additional property on the opposite side of Ocean City-Longport Boulevard that could be used as parking for beach access. Also on Atlantic County's list for possible open space acquisition.
- **EHT Bikeway** – This 2.8 mile pedestrian bike path will run along the existing electric company easement and connect from the Atlantic County Bikeway along West Jersey & Reega Avenues to the existing bike path near Twisted Dune Golf Course. Along it's course, the proposed bike path will provide access to a number of recreational, academic, cultural and social sites.

F. RECOMMENDATIONS

Egg Harbor Township should continue to assess the need for recreation and open space facilities as growth continues. The following recommendations, if implemented, will help the Township to plan for adequate recreation opportunities to meet the current and future needs of residents while minimizing any necessary expenses.

1. The township should continue to work closely with Atlantic County in coordinating future land acquisitions and improvements for recreation purposes. This type of coordination enables the most efficient use of resources and will result in providing recreation opportunities throughout the Township that are capable of serving both local and regional needs.

2. All potential sources of funding for recreation purchases and improvements should be explored individually and in conjunction with Atlantic County. Sources may include but not necessarily be limited to Green Acres Funding, the state open space tax fund, the municipal open space tax fund, private investment, developer contributions and other grant / loan programs.

3. Existing streams and woodlands should be maximized where appropriate as links between major active recreation areas and/or schools. These natural passive recreation areas encourage wildlife migration and nature study, while providing public access through pedestrian paths and linking individual neighborhoods.

4. The Township should actively seek donations of sizeable vacant parcels in strategic locations.

5. Proper budgeting and incorporating the cost of maintenance in the capital improvement budget will help preserve the Township's extensive investment in recreation and park areas.

6. Acquisition and development of parks should be encouraged in areas that are readily accessible to residents. The Township should continue the policy of establishing larger regional parks while discouraging a proliferation of "pocket" parks.

7. The Township should explore the acquisition of an additional passive park in the CAFRA area similar in size to the Temple Tract.

8. The Township should continue to explore the acquisition of a 25- to 35-acre park similar to Tony Canale Park in the Pinelands Regional Growth Area along with expansions of both Tony Canale Park and Childs-Kirk Park.

9. The Township should coordinate with the Board of Education to develop joint-use facilities, at both existing and future schools sites, that will be available to the student population and the general public.